Enrollment Limitations
It should be carefully noted that possession of the minimum requirements does not in itself guarantee admission to any course, program, department or faculty at the University. In those instances where the number of qualified applicants exceeds the number that, in the opinion of the University, can be accommodated, the University reserves the right to select the quota from among the qualified applicants.

Address all enquiries to: Enrollment Services, Simon Fraser University, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada.

Protection of Privacy
Simon Fraser University collects and retains student and alumni personal information under the authority of the University Act (R.S.B.C. 1996, c.468, s. 27(4)(a)). The information is related directly to and needed by the University for the purposes of admission, registration, graduation and other activities related to its programs, being a member of the Simon Fraser University community and attending a public post secondary institution in the Province of British Columbia.

The information will be used to admit, register and graduate students, record academic achievement, issue library cards and transit passes and administer and operate academic, athletic, recreational, residences, alumni and other University programs.

Information on admission, registration and academic achievement may also be disclosed and used for statistical and research purposes by the University, other post-secondary educational institutions and the provincial government.

Personal information provided for admission and registration and any other information placed into the student record will be collected, protected, used, disclosed and retained in compliance with British Columbia’s Freedom of Information and Protection of Privacy Act (R.S.B.C. 1996, c. 165).

In addition to collecting personal information for its own purposes, the University collects specific and limited personal information on behalf of the Simon Fraser Student Society. The society uses this information for the purpose of membership administration, elections, annual general meetings, special general meetings and its health plans. The University discloses the personal information to the student society only for those purposes. Please contact the student society general office if you have any questions about its collection, use and disclosure.

If you have any questions about the collection, use and disclosure of your personal information by the Simon Fraser University, please contact the Manager, Media Design, Learning and Instructional Development Centre at 604-291-3092.

Notification of Disclosure of Personal Information to the BC University Student Outcomes Project
Each year, the BC University Student Outcomes Project gathers student outcomes information from graduates of BC’s universities in collaboration with The University Presidents Council (TUPC) and the Ministry of Advanced Education. Each BC university provides to the University Student Outcomes Project student identification information (student’s name, student ID number), student contact information (address and telephone number), student demographic characteristics and academic program information. The information is used by the project to contact BC university graduates to conduct voluntary telephone surveys two and five years after graduation.

Survey participants are asked to report their level of program satisfaction, degree of skill development, education financing and debt load, participation in further education, and employment outcomes. The information gathered by the survey is summarized in aggregate form without identifying individual students. The data is used to meet the demand for university accountability at the system level in BC; to gather timely and relevant data for use in program evaluation and planning processes; and to ensure that new, continuing and prospective students are provided with information they can use to help them make informed career decisions.

Notification of Disclosure of Personal Information to Statistics Canada
Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education.

It is essential to be able to follow students across time and institutions to understand, for example, the factors affecting enrolment demand at post-secondary institutions. The increased emphasis on accountability for public investment means that it is also important to understand outcomes. In order to carry out such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates.

Information to Statistics Canada
Education financing and debt load, participation in further education, and employment outcomes. The information is related directly to and needed by the University for educational, recruitment and promotional purposes. The photographs may be used and disclosed at the University’s discretion and included in the University calendar, websites, newsletters, bulletins, brochures, advertisements, annual reports, supplements, displays, reports and other publications including off-campus news media. In addition, the photographs may be placed in the University’s Image Library which is a collection of photographs available for sale (http://lidc-image.lib.lidc.sfu.ca/). If you do not wish to be photographed in a non-public area, please inform the photographer before he/she begins taking photographs. If you allow yourself to be photographed in a non-public area you are giving the University your consent regarding its collection, use and disclosure of the photograph.

The above notice does not apply to individuals photographed in public areas where there is no expectation of privacy (i.e. Convocation Mall, cafeterias, public walkways, concourses, etc.). Photographs taken in public areas may be used and disclosed at the University’s discretion.

If you have any questions about photography on campus or the University’s collection, use and disclosure of photographs, please contact the Manager, Media Design, Learning and Instructional Development Centre at 604-291-3092.

Calendar Changes and Corrections
The Board of Governors and the Senate of Simon Fraser University reserve the right to make changes in this Calendar without prior notice. This Calendar is printed to provide students and others with information about Simon Fraser University. The University considers this Calendar to be accurate at the time of printing. In the event of errors, the actual courses, curricula, policies, procedures, regulations and requirements in effect will prevail over the provisions printed in the Calendar. In addition, the policies, procedures, programs, regulations and requirements are constantly being reviewed and revised. Any such revision may be made by Simon Fraser University without notice and shall take effect at the time of the revision unless a later date is specified when the revision is adopted. Simon Fraser University will endeavor to give the University community as much notice of the revision as it considers the circumstances permit, and will endeavor to incorporate the revision in the next printing of the Calendar. Revisions include additions, cancellations and deletions as well as changes.

Calendar Distribution
The Calendar is available on the web, in both HTML and PDF formats, at http://students.sfu.ca/calendar. An errata list citing recent updates is on that website.

Enrolled Simon Fraser University students are entitled to one free printed Calendar each year, available for in-person pick-up at the SFU Bookstore (Burnaby campus), and at Information and Registration Services (Simon Fraser University Vancouver and also Simon Fraser University Surrey).

To receive a Calendar in the mail, send a request along with full payment to: Calendar Orders, SFU Bookstore, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A 1S6, Canada.

The following costs apply: $7.50 for an address within BC, $12 for an address within the rest of North America, and $30 for an international address.

Acceptable forms of payment are Visa, MasterCard, American Express, and money orders in Canadian funds.

The Calendar is distributed to many universities, colleges, secondary schools and public libraries in BC, and to all Canadian universities.

Calendar Production
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History of Simon Fraser University

The University is named after Simon Fraser, Loyalist, fur-trader and explorer, who in 1808 completed one of the greatest journeys in the annals of Canadian history by descending the mighty river which today bears his name. The Fraser family coat of arms forms the basis of the University's coat of arms which appears on the title page of this Calendar. The colors of Simon Fraser University are red and blue.

In January 1963 a report entitled Higher Education in British Columbia and a Plan for the Future, by Dr. J.B. Macdonald, recommended the creation of a new university in the Lower Mainland. Two months later the establishment of Simon Fraser University received formal assent in the British Columbia Legislature, and in May of the same year Dr. Gordon M. Shrum was appointed Chancellor.

From a variety of sites which were offered, the Chancellor recommended to the Provincial Government that the top of 1200 foot Burnaby Mountain be selected for the new university. Lying east of Vancouver, the site commands magnificent views of Burrard Inlet, the mountains, the Fraser River and Vancouver Harbour.

Architects were invited to compete in the design of the overall campus. The Vancouver firm of Erickson/Massey won the competition, and the four architects who had been runners-up in the competition each designed at least one building within the overall plan. The outstanding architecture has won many awards.

Construction began in the spring of 1964 and eighteen months later, on September 9, 1965, Simon Fraser University opened to 2,500 students.

Since those early years the University has grown substantially. In September 2006, 24,842 students were enrolled in courses. At the June 2006 Convocation ceremonies 3,586 credentials were conferred, while at the University's October Convocation, 1,984 students received their credentials.

Simon Fraser University Vancouver
First established in 1980 in a storefront classroom on Howe Street, the Simon Fraser University Vancouver site opened in 1989, the result of a close collaboration of the University and the business, professional and cultural communities, the City of Vancouver and the Province of British Columbia. This association has grown as the University continues to seek the advice and participation of the downtown community in the development of its mission and programs.

The campus in downtown Vancouver now comprises the headquarters at Simon Fraser University Vancouver, the Morris J. Wosk Centre for Dialogue, the School for Contemporary Arts studios at 611 Alexander and the Segal Graduate School of Business. Built largely through private sector funding, the Vancouver campus offers a range of programs and services directed to mid-career intellectual and professional growth, providing continuity between work and study within an environment created specifically for advanced learning and specialized graduate and undergraduate programs. Researchers at the downtown campus benefit from their proximity to others engaged in research in the urban community.

With over 270,000 square feet of instructional resources, the campus currently serves over 30,000 students annually. Each term approximately 2,000 undergraduates and 500 graduate students take credit courses, and thousands of individuals, groups and companies pursue continuing studies education opportunities, attend public programs, or use the campus for community, corporate and other meetings.

In 2008 the School for the Contemporary Arts will move its Burnaby campus programs to the Vancouver campus and will occupy a new facility on the redeveloped Woodward’s site.

Simon Fraser University Surrey
Simon Fraser University Surrey is one of BC’s leading university campuses for study and research. Offering distinctive nationally and internationally acclaimed programs, Simon Fraser University Surrey promotes student success with a high quality learning environment based on innovative teaching approaches, small class sizes, and a vibrant research community. The campus, which opened its doors in September 2002, is located adjacent to the Surrey Central SkyTrain station at King George Highway and 102nd Avenue. Undergraduate programs in Arts and Social Sciences, Business Administration, Computing Science, Education, Interactive Arts and Technology, and Science are being offered. Additionally, graduate programs are being offered in Computing Science, Education, Counselling Psychology and Educational Psychology, Interactive Arts and Technology, and Mathematics.

Students entering their first year of university at Simon Fraser University Surrey can choose from three innovative cohort programs: TechOne, an interdisciplinary program focusing on the interplay of creative arts and information technology (offered by the Faculty of Applied Sciences), Science Year One, a suite of first year science courses targeted towards Science majors (offered by the Faculty of Science) and Explorations, a program presenting students with opportunities in the humanities and social sciences (offered by the faculty of Arts and Social Sciences). Continuing Studies programs are also offered. More than 1,285.6 FTE undergraduate and graduate students are enrolled in these and many other Surrey programs, a number which is projected to increase to 2,500 FTEs by the year 2010.

The new campus occupies 21,500 square metres in the stunning facility, which was designed by renowned architect Bing Thom.
### University Telephone Numbers

**main switchboard for all campuses 778.782.3111**

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<tr>
<th>Burnaby Mountain Campus</th>
<th>Phone</th>
<th>Fax</th>
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<tr>
<td>Campus Security</td>
<td>778.782.3100</td>
<td>778.782.3469</td>
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<tr>
<td>Parking</td>
<td>778.782.4577</td>
<td>778.782.5386</td>
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<td>Winter Road Conditions</td>
<td>604.444.4929</td>
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<tr>
<td>Faculty of Applied Sciences</td>
<td>778.782.4724</td>
<td>778.782.5802</td>
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<td>Faculty of Arts and Social Sciences</td>
<td>778.782.4414</td>
<td>778.782.3033</td>
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<td>Faculty of Business Administration</td>
<td>778.782.3708</td>
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<td>Faculty of Education</td>
<td>778.782.3395</td>
<td>778.782.3203</td>
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<td>778.782.4821</td>
<td>778.782.5927</td>
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<td>Faculty of Science</td>
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<td>Graduate Studies</td>
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<td>778.782.3080</td>
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<td>Student Admission, Registration, Records</td>
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<td>Human Rights Office</td>
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<td>Health and Counselling Centre</td>
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<td>Library, W.A.C. Bennett</td>
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<td>President's Office</td>
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<td>778.782.4860</td>
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<td>Simon Fraser Student Society</td>
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<td>Academic Advising</td>
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<td>Admissions</td>
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<td>Campus Tours</td>
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<td>Financial Assistance and Awards</td>
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<td>U-Pass Office</td>
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<tr>
<td>External Relations</td>
<td>778.782.408</td>
<td>778.782.7488</td>
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<td>Library</td>
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<tr>
<td>Security</td>
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<td>778.782.7488</td>
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<td>Student and Registrar Services</td>
<td>778.782.7400</td>
<td>778.782.7403</td>
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<tr>
<td>Administration</td>
<td>778.782.5010</td>
<td>778.782.5008</td>
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<tr>
<td>Health and Counselling Centre</td>
<td>778.782.5200</td>
<td>778.782.5025</td>
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<tr>
<td>Student and Registrar Services</td>
<td>778.782.5006</td>
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<td>778.782.5800</td>
<td>778.782.5025</td>
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<td>Morris J. Wosk Centre for Dialogue</td>
<td>778.782.5800</td>
<td>778.782.5025</td>
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<tr>
<td>Public Affairs and Media Relations</td>
<td>778.782.5151</td>
<td>778.782.5008</td>
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<tr>
<td>Segal Graduate School of Business</td>
<td>778.782.5800</td>
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<td>Security</td>
<td>778.782.5029</td>
<td>778.782.7910</td>
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<tr>
<td>SFU Bookstore</td>
<td>778.782.5048</td>
<td>778.782.5219</td>
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### Telephone Number Changes

Telephone number prefixes are in the process of changing from 604-291-xxxx to 778-782-xxxx. By September 2007, all telephone numbers as shown in this publication will be correct. However, in the interim, some of the original prefixes will remain as 604-291-xxxx. Should you have difficulty, please call the main switchboard at 604-291-3111 or 778-782-3111.
Undergraduate Programs

Simon Fraser University offers three main types of undergraduate programs: honors programs leading to an **honors degree**, general programs leading to a **general degree**, and an **extended minor degree**. Most departments offer all these types of programs.

To be granted a degree, a student must satisfy certain requirements which ensure a depth of study and a coherent combination of courses. These requirements, called a **degree program**, are expressed in terms of the number of units in lower and upper division courses to be taken in and outside the subject(s) of concentration. Depending on the extent of concentration in a subject area, a degree program may offer an honors program, a major program, a minor program, or certain combinations. Students are encouraged to sample a wide range of courses before focusing on a particular area of concentration, but normally must commit themselves to their area(s) before entering the second half of the degree program. Students should be aware of any prerequisite courses for their programs that they may need to undertake in the first four levels. (See the Definitions section following.)

**Degree Requirements**

All students admitted to the University as of fall 2006 must meet writing, quantitative, and breadth requirements in completing their undergraduate degree. See “Writing, Quantitative, and Breadth Requirements” on page 7.

Students should refer carefully to overall requirements of the faculties for degree requirements, as the requirements for a specific degree must be fulfilled. Some departments require specific prerequisite courses for entry to some upper division courses, and some faculties require completion of a minimum number of upper division courses to fulfill degree conditions. Some faculties require completion of a minimum number of units within the faculty to qualify for a degree. If in doubt, seek advice from Academic Advising and Success.

**Honors Program**

An honors degree is comprised of 132 units in a specified honors program including approximately 48-50 units in specified upper division courses in the honors subject or field. Different honors programs have varying credit hour requirements in the lower division courses. (See faculty and departmental requirements.)

**Joint Honors Program**

A joint honors degree requires completion of at least 132 units including the completion of a specified joint honors program, which would normally consist of a total of at least 50 units in upper division courses taken in two or more disciplines, as specified. Different joint honors programs have varying credit hour requirements in the lower division courses. (See faculty and departmental requirements.)

**Major Program**

A general degree requires at least 120 units and, normally, completion of a major program. A major program consists of approximately 28 to 30 units in upper division courses as specified in the major subject or field. Varying credit hour requirements are needed in the lower division courses for different major programs. (See faculty and departmental requirements. With special approval, two minors may be substituted for a major in the bachelor of education degree. The bachelor of general studies degree has broad requirements.)

**Joint Major Program**

A general degree may be obtained by completion of 120 units including the completion of a joint major program. The specific joint major requires at least 30 units in upper division courses taken in two or more disciplines, as specified. Credit hour requirements in the lower division courses vary for different joint major programs. (See faculty and departmental requirements.)

**Double Major Program**

A general degree may include completion of two major programs. The student must complete the following.

- the lower division requirements for each of the major subjects selected
- at least 28 hours of upper division courses as specified in each of the two subjects in which the majors are to be claimed
- any other requirements of the particular departments concerned
- the requirements of the faculty in which the student will receive the degree

This permits study of two majors within a single faculty or across faculties. The bachelor's degree awarded will be determined according to the faculty in which all requirements have been met or, if the requirements of more than one faculty have been met, then from the faculty that the student selects. (See Major-Minor Program following.)

**Minor Program**

A minor requires completion of at least 14 to 18 upper division units as specified in the subject. To qualify for a specific minor, at least seven units of upper division credit used toward the minor must have been completed in Simon Fraser University courses. A minor program also requires meeting any stipulated lower division requirements and may be used toward the requirements of a degree program.

**Extended Minor Program**

This program consists of the lower division requirements for a major, and the upper division requirements for a minor. A student must have their program approved by the extended minor program advisor.

**Major – Minor Program**

A general degree may include the completion of a major program and a minor program. The student must complete at least 28 hours of upper division courses as specified in the major subject, and at least 14 to 18 hours of upper division courses as specified in the minor subject. The same upper division course may not be used for formal credit in both the major and the minor. The student must complete the lower division requirements for the major subject selected, all other requirements of the major department, the lower and upper division requirements for the minor selected, and the requirements of the faculty in which the student will receive the degree. This permits the undertaking of a major and a minor within a single faculty or across faculties.

**Double Major and Major – Minor Programs**

Credit Value of Courses

In order to give sufficient weight to both majors in a double major program, the student may not apply the same upper division course for formal credit in both majors. Similarly, a student in a major-minor program may not use the same upper division course for formal credit in both the major and the minor. Also, a student undertaking a program consisting of more than one minor may not use the same upper division courses for credit toward more than one minor.

Where one course fulfills the content requirements of two related areas, additional replacement units in upper division work satisfactory to one of the departments or program committees must be taken to fulfill the overall credit requirements for the double major or major-minor program.

For lower division requirements, one course could fulfill both content and credit requirements as a prerequisite, but no course can carry double credit toward the degree total. In a number of possible combinations in the bachelor of arts or bachelor of general studies degree, certain constraints exist on the use of both lower and upper division courses.

In some instances, therefore, a student seeking a double major or a major-minor involving subjects in...
Writing, Quantitative, and Breadth

Concerned and Student Services.

Faculty concerned have been fulfilled. Notification of requirements for the major and requirements of the major-minor program may change his/her decision.

A student who elects to take a double major or a major-minor program in a particular subject may enrol in a further degree with a major or honors program in that subject.

Credit earned towards a previous degree or diploma may not be used toward a further bachelor’s degree. Transfer credit may be given for additional courses taken beyond the previous credential but prior to admission to the University. Some faculties may have additional residency requirements.

Faculty may limit inter-faculty transfer for second degree students.

Students admitted to second degrees are deemed to have met all of the breadth requirements (designated and undesignated), three units of the Q requirements and the lower division W requirement. (The remaining W and Q courses must be three units each. The W course must be upper division.)

For more information, see “Writing, Quantitative, and Breadth Requirements” on page 7.

Post Baccalaureate Diploma Program

A diploma program should, in general, consist of regular upper division university courses; graduate courses may be included. The study program should be the equivalent of one full year or more of university study (30 or more units). A first university degree or the equivalent is normally a prerequisite, but, if stipulated, mature applicants whose experience makes them particularly suited to a program may also be admitted.

Program Admission Requirements

• Completion of a recognized bachelor’s degree (in any field of study) with a minimum graduation grade point average of 2.0 from a university in British Columbia or with a minimum graduation grade point average of 2.4 from a university outside of British Columbia, or equivalent.

• Students applying to the University for admission are required to meet undergraduate admission deadlines. Application forms should be accompanied by official documents and a statement of objectives in undertaking a diploma program.

Program Requirements

• Successful completion of an approved program comprised of 30 units of third and fourth year courses, and some graduate courses if appropriate.

• At least 15 units must be in a discipline or subject area which most closely fits the learning goals of the student.

• Minimum grade point average of 2.5 on courses applied toward the diploma.

• Completion of lower division prerequisites, if required.

• Completion of the diploma within five years of admission to the program.

Notes

• Students may complete more than one program toward baccalaureate diploma program.

• Students should consult with the diploma program advisor regarding availability of courses.

• Some of the program courses have prerequisites not included in the diploma requirements. Students are responsible for satisfying the prerequisites of all courses in their programs.

• Program applicants will need to refer to the current university calendar for detailed information concerning application and enrollment procedures, fees, program requirements, and course descriptions.

• There are program advisors in each department for that department's diploma programs.

Transfer Credit

• Transfer credit for work done at other institutions, before or after admission to the program, may be approved toward fulfillment of the program provided that at least 18 of the 30 required upper division units, including at least nine units in the student's area of concentration, be taken at Simon Fraser University.

• Transfer credit is normally only valid for approved courses taken within ten years of the diploma student's completion term.

• Transfer credit for use toward the diploma is granted only on approval of the registrar, the appropriate faculty post baccalaureate diploma committee, and the dean of the appropriate faculty.

• Credit for work done at Simon Fraser University or transfer credit for work done elsewhere prior to admission to the program may be approved provided that at least 15 of the 30 required upper division units, including at least eight units in the student's area of concentration, normally be taken after admission to the program.

• Units applied to one diploma may not be applied to another Simon Fraser University certificate or diploma or degree, and vice versa.

Certificate Program

A certificate program consists mainly of regular lower division courses; upper division courses may be included. The program should be the equivalent of between one half and one full year of university study (15-30 units).

Program Admission Requirements

• Prospective students must apply to Simon Fraser University for admission and meet the normal admission requirements prior to undertaking a certificate program.

Program Requirements

• Students must maintain a minimum grade point average of 2.0 calculated on all courses applied to the certificate that are taken at Simon Fraser University. Duplicate courses are counted only once.

Note

• Units applied to one certificate may be applied also to major or minor programs of a bachelor's degree under the normal regulations governing those programs but may not be applied to another Simon Fraser University certificate or diploma.

• Some of the courses have prerequisites not included in the certificate requirements. Students are responsible for satisfying the prerequisites of all courses in their programs. Prerequisite information can be found in the University calendar in the course descriptions section.

• There are program advisors in each department or faculty for the certificate programs. Students intending to pursue a certificate should consult with the program advisor.

• Any student admitted to a certificate program who subsequently transfers to a degree program will need to complete the WQB degree requirements. See “Writing, Quantitative, and Breadth Requirements” on page 7.

Co-operative Education

A co-operative education program consists of four or five work terms to be completed while doing regular academic terms. Co-op courses are granted additive credit. See “Additive Credits” on page 237 and “Additive Credit” on page 31.

Undergraduate Degree Requirements

Students admitted to the University beginning in the fall 2006 term must meet writing, quantitative, and breadth requirements as part of any degree program they may undertake.

Writing, Quantitative, and Breadth Requirements

All students completing an undergraduate degree program must complete a total of 36 units of courses designated as meeting writing, quantitative, or breadth requirements with a grade of C- or better.
they may enroll in an upper division W course at the University as soon as possible after admission.

**Upper Division W Requirements**
- one upper division W course, normally in the major subject (3 units or more)

The upper division W course must be taken at Simon Fraser University.

For a list of currently offered W courses, see www.sfu.ca/ugcr.

**Quantitative Requirements**
Quantitative-designated courses, also known as “Q” courses, will assist students to develop quantitative (numerical, geometric) or formal (deductive, probabilistic) reasoning, and to develop skills in practical problem solving, critical evaluation, or analysis.

Q courses are identified by the word “Quantitative” at the end of the course description, just after the prerequisite information. For example (italics added):
- BUS 251-3 Financial Accounting (An introduction to financial accounting...)
- Prerequisite: 12 units. Quantitative.

Students must achieve a grade of C- or better in Q courses to obtain the Q credit.

**Lower/Upper Division Q Requirements**
- two Q courses, lower or upper division (total 6 units or more)

Students are required to complete their first Q course within their first 60 units of a degree program.

Students transferring to Simon Fraser University from a BC college with 60 units are recommended to complete a transferable Q course prior to admission to Simon Fraser University, or to enroll in a Q course at Simon Fraser University as soon as possible after admission.

For a list of currently offered Q courses, see www.sfu.ca/ugcr.

**Breadth Requirements**
Breadth courses, also known as “B” courses, will expose students to concepts and ideas from a range of disciplines and perspectives, and will offer students an opportunity to examine and assess their values, beliefs and commitments.

B-designated courses are identified at the end of the course description by the words Breadth-Humanities (B-Hum), Breadth-Social Sciences (B-Soc), or Breadth-Science (B-Sci) just after the prerequisite information. For example (italics added):
- CMNS 110-3 Introduction to Communication... (undesignated, 6 units)
- CMNS 110-3 Introduction to Communication... An introduction to selected theories about human... communication. Breadth-Social Sciences

Students must complete a total of 24 units of breadth courses, and must achieve a grade of C- or better in B courses to obtain the B credit.

**Six Designated Breadth Courses**
Students may complete designated breadth courses outside their major throughout their degree programs, taking courses at the lower or upper division.

- Breadth-Humanities
  - two courses labelled as Breadth-Humanities (B-Hum, 6 units)
- Breadth-Science
  - two courses labelled as Breadth-Science (B-Sci, 6 units)
- Breadth-Social Science
  - two courses labelled as Breadth-Social Sciences (B-Soc, 6 units)

**Two Additional Breadth Courses**
- two courses outside the student’s major program (undesignated, 6 units)

These additional courses may or may not be designated as breadth, and in most cases will fulfill the particular faculty or program breadth requirements. The Faculty of Arts and Social Sciences requires two further breadth courses (see “Writing, Quantitative, and Breadth Requirements” on page 130).

Only courses outside of the student’s major may count as breadth. For example, a student majoring in engineering science will not be able to count ENSE 100 as one of their B-Sci requirements. Similarly, students majoring in English will not be able to count ENGL 101 as one of their B-Hum requirements.

For a list of currently offered B courses, see www.sfu.ca/ugcr.

**Multiple W, Q, and B Designations**
Some courses may fulfill more than one requirement. For instance, a course may count as both Q and B, or W and B, or W and Q, or Q and B, and students will receive all designation credit. No course, however, may fulfill two B requirements. Some courses may have multiple B designations (such as B-Soc and B-Hum), but students must decide which designation of a course to use in order to fulfill their requirements. For example, when taking Archaeology 232, a student must decide if they are taking this course to fulfill B-Sci or B-Hum, even though the course will appear on the transcript with both labels.

Students who change degree programs may need to re-visit any breadth designations they have previously chosen in light of their new program requirements.

**Foundations Courses**
The content of W and Q courses assumes that students have met a basic competency standard. Two Foundations courses are available to students who are not ready for W and/or Q courses:
- Foundations of Academic Literacy (FAL), and
- Foundations of Analytical and Quantitative Reasoning (FAN)

Students will be advised at admission if they are required to enroll in one of both of these courses.

Students required to enroll in one or both of these courses must complete the course(s) within their first three terms of study at Simon Fraser University (normally 45 units). A grade of C or better is required to progress from FAL into W courses or FAN into Q courses. Students may attempt these courses no more than twice. If the required grade of C is not achieved in two attempts or before 45 units at the University, students will be blocked from enrolling in further course work at Simon Fraser University until competency in English and Math are demonstrated.

**WQB Graduation Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>W - Writing</td>
<td>6</td>
<td>Must include at least one upper division course, normally within the student's discipline</td>
</tr>
<tr>
<td>Q - Quantitative</td>
<td>6</td>
<td>Q courses may be lower or upper division</td>
</tr>
<tr>
<td>B - Breadth</td>
<td>18</td>
<td>Must be outside the student's major, and may be lower or upper division</td>
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<tr>
<td></td>
<td></td>
<td>6 units Social Sciences: B-Soc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 units Humanities: B-Hum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 units Sciences: B-Sci</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6 units outside the student's major program (may or may not be B-designated courses, and will likely help fulfill individual degree program requirements)</td>
</tr>
</tbody>
</table>
requirements. W, Q, and B designated courses in either one or both disciplines of the majors or honors program may be used to satisfy the writing, quantitative and breadth requirements. For example, a student taking a double major in English and Physics may count B-Science designated Physics courses as B-Science, and B-Humanities designated English courses as B-Humanities, W designated English for the lower and upper division W requirement, and Q designated Physics courses toward the Q requirement.

Second Degrees
Students admitted to a second degree program are deemed to have met all of the breadth requirements (designated and undesignated), three units of the Q requirements, and the lower division W requirement. (The remaining W and Q courses must be three units each. The W course must be upper division.) See “Second Bachelor’s Degrees” on page 7.

WQB Transfer Credit from College
BC college courses that transfer to Simon Fraser University courses for credit and are certified as W, Q and B will be labelled as W, Q and B on the student's Simon Fraser University record.

Faculty of Arts and Social Sciences
Certificate in Chinese Studies
Certificate in Sustainable Community Development
Certificate in Criminology (General)
Certificate in Criminology (Advanced)
Certificate in Ethnic and Intercultural Relations
Certificate in Explorations in the Arts and Social Sciences
Certificate in Family Studies
Certificate in First Nations Language Proficiency
Certificate in French Canadian Studies
Certificate in French Language Proficiency
Certificate in Hellenic Studies
Certificate in Italian Studies
Certificate in Liberal Arts
Certificate in Native Studies Research
Certificate for Senior Citizens
Certificate in Spanish Language Proficiency
Certificate in Spatial Information Systems
Certificate in Teaching ESL Linguistics
Certificate in Urban Studies
Post Baccalaureate Diploma
Post Baccalaureate Diploma in Sustainable Community Development
Post Baccalaureate Diploma in Criminology
Post Baccalaureate Diploma in First Nations Studies
Post Baccalaureate Diploma in French and Education
Post Baccalaureate Diploma in Gerontology
Post Baccalaureate Diploma in Humanities
Post Baccalaureate Diploma in Legal Studies
Post Baccalaureate Diploma in Social Policy Issues
Post Baccalaureate Diploma in Teaching English as a Second Language
Graduate Diploma in Urban Studies

Faculty of Business Administration
Graduate Diploma in Business Administration

Faculty of Education
Certificate in Literacy Instruction
Post Baccalaureate Diploma (General)
Post Baccalaureate Diploma in Early Childhood Education
Post Baccalaureate Diploma in Special Education
Graduate Diploma in Advanced Professional Studies in Education

Faculty of Health Sciences
Graduate Diploma in Global Health

Faculty of Health Sciences
Certificate in Chinese Studies
Certificate in Criminology (General)
Certificate in Criminology (Advanced)
Certificate in Ethnic and Intercultural Relations
Certificate in Explorations in the Arts and Social Sciences
Certificate in Family Studies
Certificate in First Nations Language Proficiency
Certificate in French Canadian Studies
Certificate in French Language Proficiency
Certificate in Hellenic Studies
Certificate in Italian Studies
Certificate in Liberal Arts
Certificate in Native Studies Research
Certificate for Senior Citizens
Certificate in Spanish Language Proficiency
Certificate in Spatial Information Systems
Certificate in Teaching ESL Linguistics
Certificate in Urban Studies
Post Baccalaureate Diploma
Post Baccalaureate Diploma in Sustainable Community Development
Post Baccalaureate Diploma in Criminology
Post Baccalaureate Diploma in First Nations Studies
Post Baccalaureate Diploma in French and Education
Post Baccalaureate Diploma in Gerontology
Post Baccalaureate Diploma in Humanities
Post Baccalaureate Diploma in Legal Studies
Post Baccalaureate Diploma in Social Policy Issues
Post Baccalaureate Diploma in Teaching English as a Second Language
Graduate Diploma in Urban Studies

Faculty of Business Administration
Graduate Diploma in Business Administration

Faculty of Education
Certificate in Literacy Instruction
Post Baccalaureate Diploma (General)
Post Baccalaureate Diploma in Early Childhood Education
Post Baccalaureate Diploma in Special Education
Graduate Diploma in Advanced Professional Studies in Education

Faculty of Health Sciences
Graduate Diploma in Global Health
Faculty of Science
Certificate in Actuarial Mathematics
Certificate in Forestry Geoscience
Post Baccalaureate Diploma in Biological Sciences
Graduate Diploma in Bioinformatics
Graduate Diploma in Quantitative Methods in Fisheries Management

Graduate Studies
Graduate Certificate in Development Studies

Credentials by Program

Key to abbreviations used below

- BA: Bachelor of Arts
- BBA: Bachelor of Business Administration
- BEd: Bachelor of Education
- BEd honors: Bachelor of Education (Honors)
- BASc: Bachelor of Applied Science
- BFA: Bachelor of Fine Arts
- BGS: Bachelor of General Studies
- BSc: Bachelor of Science
- BSc honors: Bachelor of Science (Honors)
- certificate: certificate
- co-op: co-operative education program
- diploma: post baccalaureate diploma
- EdD: Doctor of Education
- extended minor: extended minor
- graduate certificate: graduate certificate
- joint major: joint programs
- joint honors, joint MA: joint programs
- MA: Master of Arts
- MALS: Master of Arts Liberal Studies
- MAsc: Master of Applied Science
- MBA: Master of Business Administration
- MDM: Master of Digital Media
- Med: Master of Education
- MEng: Master of Engineering
- MFA: Master of Fine Arts
- minor: program requiring completion of specified minimum upper division courses
- MPM: Master of Pest Management
- MPP: Master of Public Policy
- MPub: Master of Publishing
- MRM: Master of Resource Management
- MSc: Master of Science
- MUrB: Master of Urban Studies
- PhD: Doctor of Philosophy

Actuarial Mathematics – certificate
Actuarial Science – BSc, honors, certificate, MA, MSc
Advanced Professional Studies in Education – graduate diploma
Anthropology – BA, minor, extended minor, honors, co-op
Anthropology or Sociology, and Art and Culture Studies – joint major
Applied Human Nutrition – certificate
Applied Mathematics – BSc, honors
Applied and Computational Mathematics – MSc, PhD
Applied Physics – BSc, honors
Archaeology – BA, minor, extended minor, honors, MA, PhD, co-op
Archaeology and Anthropology – BA joint major
Archaeology and First Nations Studies – BA joint major
Art and Culture Studies – BA, minor
Art and Culture Studies and Sociology and/or Anthropology – BA joint major
Arts, General – BA, extended minor
Arts Education – MA, Med, PhD
Asia-Canada – extended minor

Bioinformatics – graduate diploma
Biological Physics – BSc, honors
Biological Sciences – BSc, minor, honors, MSc, PhD, diploma, co-op
Business Administration – BBA, minor, honors, MBA, PhD, graduate diploma, co-op
Business Administration and Communication – BBA joint major
Business Administration and Computing Science – BBA joint major, BSc joint major
Business Administration and Economics – BBA joint major, joint honors, BA joint major, joint honors
Business Administration and Geography – BBA joint major, BA joint major
Business Administration and Latin American Development Studies – BBA, joint major, BA joint major
Business Administration and Psychology – BBA joint major, BA joint major
Central Asia Studies – BA, minor, extended minor, honors
Canadian Studies and Anthropology – BA joint major, honors
Canadian Studies and Archaeology – BA joint major, honors
Canadian Studies and Business Administration – BA joint major, honors, BBA joint major, honors
Canadian Studies and Communication – BA joint major, honors
Canadian Studies and Criminology – BA joint major, honors
Canadian Studies and Economics – BA joint major, honors
Canadian Studies, Economics and/or Business Administration – BBA joint major, honors, BA joint major, honors
Canadian Studies and English – BA joint major, honors
Canadian Studies and Geography – BA joint major, honors
Canadian Studies and History – BA joint major, honors
Canadian Studies and Political Science – BA joint major, honors
Canadian Studies and Sociology – BA joint major, honors
Canadian Studies and Sociology and/or Anthropology – BA joint major, honors
Chemical Physics – BSc, honors, co-op
Chemistry – BSc, minor, honors, MSc, PhD, co-op
Chinese Studies – certificate
Cognitive Science – BA, honors
Communication – BA, minor, extended minor, honors, MA, PhD, diploma, co-op
Computer and Electronics Design – minor
Computing Science – BSc, minor, honors, BA, honors, BSc dual degree, MSc, PhD, diploma, co-op
Computing Science and Linguistics – BA joint major, BSc joint major
Computing Science and Molecular Biology and Biochemistry – BSc joint major
Computing Science and Philosophy – BA joint major, BA joint honors, BSc joint major, BSc joint honors
Computing Studies – certificate
Contemporary Arts – BA, BFA, minor, extended minor, joint major, MFA
Counselling and Human Development – minor
Counselling Psychology – MA, Med
Criminology – BA, minor, extended minor, honors, MA, PhD, general and advanced certificate, diploma, co-op
Curriculum and Instruction – minor, MA
Curriculum Theory and Implementation – PhD
Dance – BFA, extended minor
Development Studies – graduate certificate
Digital Media – MDM
Early Childhood Education – minor, diploma

Earth Sciences – BSc, minor, honors, MSc, PhD, co-op
Economics – BA, minor, honors, MA, PhD, co-op
Education – BEd, honors, MED, MA, MSc, PhD, EdD, diploma, certificate, graduate diploma
Educational Leadership – MA, Med, EdD
Educational Practice – Med
Educational Psychology – minor, MA, Med, PhD
Educational Technology and Learning Design – MA, Med, PhD
Elementary School Physical Education – minor
Engineering Science – BA, MSc, MEng, PhD, co-op
English – BA, minor, extended minor, honors, MA, PhD, co-op
English and French Literatures – BA joint major, joint MA
English and Humanities – BA joint major
English and Women’s Studies – BA joint major
Health and Fitness Studies – certificate
Health Sciences – BSc, minor, honors
Health and Fitness Studies – certificate
History – BA, minor, extended minor, honors, MA, PhD, co-op
History and Humanities – BA joint major
History and Women’s Studies – BA joint major
Humanities – BA, minor, extended minor, diploma, co-op
Humanities and French – BA joint major
Humanities and Women’s Studies – BA joint major
Individual Program – MA, Med
Industrial Mathematics – BSc, honors, co-op
Information Systems in Business Administration and Computing Science – BBA, BA, BSc joint major
Integrated Studies – BGS
Interdisciplinary Arts and Technology – BA, BSc, minor, honors, MA, MSc, PhD, co-op
International Studies – BA, minor, honors
International and Global Education – minor
Italian Studies – certificate

Simon Fraser University 2007 • 2008 Calendar
Kinesiology – BSc, minor, honors, MSc, PhD, diploma, co-op
Labor Studies – minor, certificate
Latin American Development Studies – minor, extended minor, MA, co-op
Latin American Development Studies and Archaeology – BA joint major
Latin American Development Studies and Business Administration – BA joint major, BBA joint major
Latin American Development Studies and Communication – BA joint major
Latin American Development Studies and Economics – BA joint major
Latin American Development Studies and Geography – BA joint major
Latin American Development Studies and History – BA joint major
Latin American Development Studies and Political Science – BA joint major
Latin American Development Studies and Sociology and/or Anthropology – BA joint major
Learning Disabilities – minor
Legal Studies – minor, diploma
Liberal Arts – certificate, co-op
Liberal Studies – MALS
Life Sciences Year Two Program – 200 division BISC, CHEM, MBB courses
Linguistics – BA, minor, extended minor, honors, MA, PhD
Linguistics and Anthropology – BA joint major
Literacy Instruction – certificate
Management and Systems Science – BSc, honors, co-op
Management of Technology MBA – MBA
Marine Science
Mathematical Physics – BSc (honors only)
Mathematics – BA, minor, extended minor, honors, BSc, minor, honors, MSc, PhD, co-op
Mathematics and Computing Science – BSc joint major, joint honors
Mathematics Education – PhD
MBA Program – MBA
Mechatronic Systems Engineering – BASc major, honors
Molecular Biology and Biochemistry – BSc, minor, honors, MSc, PhD, co-op
Molecular Biology and Biochemistry and Business Administration – BSc joint major, joint honors
Music – BFA, extended minor
Master of Arts – co-op
Native Studies Research – certificate, co-op
Nuclear Science – minor
Pest Management – MPM
Philosophy – BA, minor, extended minor, honors, MA, PhD, co-op
Philosophy and Humanities – BA joint major
Physical Education – minor
Physical Geography – BSc, minor, honors, co-op
Physics – BSc, minor, honors, MSc, PhD, co-op
Political Science – BA, minor, extended minor, honors, MA, MSc, PhD, co-op
Political Science and Economics – BA joint major
Political Science and Women’s Studies – BA joint major
Population and Public Health – MSc
Professional Practices – certificate
Psychology – BA, minor, extended minor, honors, MA, PhD, co-op
Psychology and Criminology – BA joint major
Psychology and Women’s Studies – BA joint major
Public Policy – MPP
Publishing – minor, MPub
Quantitative Methods in Fisheries Management – graduate diploma
Resource and Environmental Management – MRM, MSc (Planning), PhD, co-op
Resource Management and Business Administration – MRM, MBA joint
Science, General – BSc
Science Year One Program – 100 division BISC, CHEM, CMPT, ECON, MACM, MATH, PHYS, STAT courses
Secondary Mathematics Education – minor, MSc, MEd
Senior Citizens, Certificate for – certificate
Social Policy Issues – diploma
Sociology – BA, minor, extended minor, honors, co-op
Sociology and Anthropology – BA joint major, joint honors, MA, PhD, co-op
Sociology or Anthropology and Art and Culture Studies – BA joint major
Sociology or Anthropology and Communication – BA joint major
Sociology and/or Anthropology and Criminology – BA joint major
Sociology and/or Anthropology and Linguistics – BA joint major
Sociology and/or Anthropology and Women’s Studies – BA joint major
Spanish Language Proficiency – certificate
Spatial Information Systems – certificate
Special Education – diploma
Statistics – BA, minor, extended minor, honors, BSc, minor, honors, MSc, PhD, co-op
Sustainable Community Development – certificate, diploma
Teaching English as a Second Language – diploma
Teaching English as a Second or Foreign Language – MEd
Teaching ESL Linguistics – certificate
TechOne – lower division Simon Fraser University Surrey courses
Theatre – BFA, extended minor
Undergraduate Semester in Dialogue
Urban Studies – MUrb, certificate, graduate diploma
Visual Art – BFA, extended minor
Women’s Studies – BA, minor, extended minor, MA, PhD, co-op
World Literature – BA, minor, honors
Academic Calendar of Events

2007 Fall Term

August
31 Fri Last day for continuing graduate students to enroll and pay fees.

September
3 Mon LABOUR DAY. Offices closed.
4 Tues Classes commence.
September
10 Mon Deadline for submission of undergraduate grade changes from 2007 summer term, summer session and intersession.
Deadline for undergraduate applications for reactivation to the fall term.
18 Tues Last day for graduate students to enroll late, and to add courses.
Last day for graduate students to drop courses with no notation on transcript.
28 Fri Last day for receipt of grades deferred from previous term for graduate students.

October
1 Mon Deadline for application for undergraduate admission or readmission to the spring term 2008.
4 Thurs Fall convocation
5 Fri Fall convocation
Certificates and diplomas awarded for 2006/2007 academic year.
8 Mon THANKSGIVING DAY. All classes cancelled. Offices closed.
9 Tues Last day for undergraduates to drop courses except under special procedures applicable in extenuating circumstances.
19 Fri Deadline for submission of undergraduate application for graduation without a late fee for students completing requirements by the end of the 2007 fall term.

November
6 Tues Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.
11 Sun REMEMBRANCE DAY. Offices closed.
12 Mon In lieu of Remembrance Day, all classes cancelled. Offices closed.
27 Tues Last day for graduate students to drop courses under special procedures applicable in extenuating circumstances.
28 Wed Last day for undergraduates to drop courses under special procedures applicable in extenuating circumstances.

December
3 Mon Classes end.
5 Wed Examination period for undergraduates begins.
7 Fri Final deadline for submission of undergraduate application for graduation (with a late fee) for students completing requirements by the end of the 2007 fall term.

2008 Spring Term

January
1 Tues NEW YEAR’S DAY. Offices closed.
4 Fri Last day for continuing graduate students to enroll and pay fees.
7 Mon Classes commence.
Last day for undergraduate students completing degree requirements in fall to cancel application to graduate.
11 Fri Deadline for undergraduate applications for reactivation to the spring term.
Deadline for submission of undergraduate grade changes from the 2007 fall term.
15 Tues Deadline for submission of application to the professional development program for the 2008 spring term.
21 Mon Deadline for submission of graduate student application to graduate for students completing requirements by the end of the fall 2007 term.
Last day for graduate students to enroll late, and to add courses.
Last day for graduate students to drop courses with no notation on transcript.
February
29 February (updated) Deadline for submission of undergraduate application for graduation without a late fee, for students completing requirements by the end of the 2008 spring term.
March
10 Mon Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.

April
1 Tues Last day for undergraduates to drop courses under special procedures applicable in extenuating circumstances.
7 Mon Classes end.
9 Wed Examination period for undergraduates begins.
10 Thurs Deadline for submission of all graduate degree requirements, including completion of MA Field Examinations and submission of graduate theses to the library.

2008 Summer Term
(including intersession, May-June and summer session, July-August)

May
2 Fri Last day for continuing graduate students to enroll and pay fees.
5 Mon Summer term and intersession classes commence.
Last day for students completing degree requirements in spring to cancel application to graduate.
9 Fri Deadline for submission of undergraduate grade changes from the spring term.
15 Thurs Deadline for submission of application to the professional development program for spring term 2009.
16 Fri Last day for undergraduates to drop intersession courses except under extenuating circumstances.
19 Mon VICTORIA DAY. All classes cancelled. Offices closed.
20 Tues Last day for graduate students to enroll late, and to add courses.
Last day for graduate students to drop courses with no notation on transcript.
30 Fri Last day for receipt of grades deferred from previous term for graduate students.

June
3 Tues Spring convocation.
4 Wed Spring convocation.
5 Thurs Spring convocation.
6 Fri Spring convocation.
9 Mon Last day for undergraduates to drop summer term courses except under special procedures applicable in extenuating circumstances.
13 Fri Intersession classes end.
16 Mon Last day for undergraduates to drop intersession courses under special procedures applicable in extenuating circumstances.
20 Fri Last day of Intersession.
23 Mon Summer session classes for undergraduates commence.
27 Fri Deadline for submission of undergraduate application for graduation without a late fee for students completing requirements by the end of the 2008 summer term.

July

1 Tues CANADA DAY. All classes cancelled. Offices closed.
7 Mon Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.

Start of Each Class Week

<table>
<thead>
<tr>
<th>Start of each class week</th>
<th>Start of each class week</th>
<th>Start of each class week</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2007 fall term</strong></td>
<td><strong>2008 spring term</strong></td>
<td><strong>2008 summer term</strong></td>
</tr>
<tr>
<td>week 1</td>
<td>week 1</td>
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</tr>
<tr>
<td>Tuesday, September 4</td>
<td>Monday, January 7</td>
<td>Monday, May 5</td>
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<tr>
<td>week 2</td>
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<tr>
<td>Tuesday, September 11</td>
<td>Monday, January 14</td>
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<td>Wednesday, October 10</td>
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<td>week 7</td>
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<td>Wednesday, June 24</td>
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<td>Wednesday, October 31</td>
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<td>Wednesday, March 26</td>
<td>Wednesday, July 23</td>
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<td>week 13</td>
<td>week 13</td>
</tr>
<tr>
<td>Thursday, November 29</td>
<td>Wednesday, April 2</td>
<td>Wednesday, July 30</td>
</tr>
</tbody>
</table>

Significant Future Dates
(tentative at time of printing)

**2008 Fall Term**
- Tuesday, September 2 – classes commence
- Thursday-Friday, October 2, 3 – fall convocation
- Monday, December 1 – classes end
- Monday, December 15 – examination period ends

**2009 Spring Term**
- Monday, January 5 – classes commence
- February 16-17 – reading break
- Monday, April 6 – classes end
- Wednesday, April 22 – examination period ends

**2009 Summer Term**
- Monday, May 4 – classes commence
- Tuesday, Wednesday, Thursday, Friday, June 2-5 – spring convocation
- Tuesday, August 4 – classes end
- Monday, August 17 – examination period ends
Undergraduate Studies
Admission and Readmission

Director, Enrollment Services
M. Kial BSc (Saint Louis, Philippines), MSc (Philippines)
Associate Director, Admissions
D. Moore BA (SFraser)
Associate Director, Enrollment Management
K. Heber BA (SFraser)
Associate Director, Recruitment Services
P. Godman BA (SFraser)

Admission Recruiters
E. Bernoth BSc (SFraser)
C. Di Francesco BA (Br Col)
J. Jin MA (Syd)
H. L. Roberts BAdmin (Open BC), MEd (SFraser)
M. Trautman BA, MEd (SFraser)
K. Wong BSW (Br Col)

Student Recruiters
J. Blankinship BA (SFraser), MA (Vic, BC)
T. Frost BA (SFraser)
H. Gawenda BA (SFraser)
M. Grant BScF (Br Col)
S. Greaves BA (Trent)
S. Lim BA (Ateneo), MBA (SFraser)
L. Thompson
L. Walker BA (SFraser)

International Student Recruiters
C. Brown BA (SFraser)
H. Maddess BFA (Emily Carr)

Simon Fraser University welcomes applications from Canadian and International students. All new students must apply for and be granted admission to the University. An admission offer is required before students may enroll in courses for academic credit. Readmission information is given later in this section.

Direct all admission related enquiries to Admissions, Student Services, Simon Fraser University, Burnaby, BC, V5A 1S6, 778.782.3224 Tel, 778.782.4969 Fax, http://students.sfu.ca
An advising service is available for potential applicants, Call 778.782.3397 for an appointment.

When eligible applicants exceed the number that can be accommodated, the University reserves the right to select from among the qualified applicants.

Protection of Privacy
Simon Fraser University gathers and maintains information used for the purposes of admission, enrollment and other fundamental activities related to being a Simon Fraser University community member and to attending a public post-secondary institution in the Province of British Columbia.

In submitting an application for admission, all applicants are advised that the information they provide and any other information placed into the student record will be protected and used in compliance with British Columbia’s Freedom of Information and Protection of Privacy Act (1992).

All British Columbian applicants will be asked to provide their BC personal education numbers (PEN) at the time of application. All others will be assigned a PEN by the British Columbia Ministry of Advanced Education, Training and Technology. Its uses are restricted to research and program evaluation. No identifiable personal information will be released.

Retention of Documents
The documents which students supply to support applications for admission will be retained for three terms following the term to which admission is made. Then, application forms, transcripts and other materials related to applications will be destroyed. Irreplaceable documents will be returned to the applicant if requested at the time of application. All other documents become the property of the University.

Introduction
This section contains five main areas.

• The Admission Process describes the "how and when" of the various stages involved in applying to the University.
• All applicants details those admission requirements or policies applicable to any applicant.
• The next three sections — British Columbia, Canada and International — provide admission requirements for the respective areas. Within each section, requirements are provided for secondary school, college, and university level applicants.

Finally, Readmission explains the requirements and processes to be followed by previously admitted students wishing to re-commence their studies.

Admission Process
Those who have previously attended Simon Fraser University but who fit into any of the following categories must apply for readmission or reactivation (see “Reactivation and Readmission” on page 29).

• students who have not enrolled in courses at the University during the previous three terms; or
• students who completed all of their degree or diploma programs at the University and wish to take further courses; or
• students who completed further academic studies at a post secondary institution during the time away from Simon Fraser University; or
• students who were involuntarily withdrawn; or
• students who voluntarily withdrew from first term of attendance (unless they withdrew under extenuating circumstances, after the application deadline for the subsequent term); or
• students who were admitted for a single term only (e.g. concurrent studies students, visiting students, exchange students, etc.)

In all other cases students may enroll directly in courses.

How to Apply
To apply for admission, go to our website at http://students.sfu.ca, which will link you to the Post-secondary Application Service of BC (PASBC).

There, you can begin your application by entering basic academic and biographical data. From PASBC, you’ll move to the Simon Fraser part of the web application, and tell us about your intended program of studies. You can pay all application fees by credit card. After your application is acknowledged, and if you're a Canadian grade 12 applying for the fall term, you will be invited to report your grades.
Application fees may be sent at the time application is made or soon after. If payment is made later, quote the reference number given to the applicant when the submission is acknowledged by the University.

Required Documents
The following supporting official documents must also be submitted from the issuing institution before any application will be considered.

• official copy of the appropriate school leaving certificate (e.g. Canadian Secondary School transcript of grades)
• official transcripts from all post-secondary institutions attended, whether or not the work was completed
• official reports of any standard tests written.

All documents must be originals. Photocopies are not acceptable. Replaceable documents submitted with an application become the property of the University and will be returned. Irreplaceable documents will be returned to the applicant if requested at the time of application.

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Regulations
In most cases, total transfer and course challenge credit may not exceed 60 units, and may not include more than 15 as upper division work. Within these limits, units may be transferred for all courses passed, which are acceptable under Simon Fraser University policies.

Transfer credit is not used in calculating the cumulative grade point average (CGPA).

Transfer credit for ungraded passes (e.g. pass/fail) will be granted only if the course has been previously articulated for transfer credit and if all students in the course are graded in a similar manner.

Transfer credit is not granted for credit assessed by other institutions for knowledge acquired outside formal instruction, but course challenge credit may be obtained for such work or knowledge.

Students who are attending, or who have attended Simon Fraser University should note that in addition to these regulations:

• work taken after initial enrollment must be passed with a grade of C (2.0 or 60%) or higher to receive transfer credit; and

• admitted students wishing to complete courses at another institution for transfer towards their Simon Fraser University program must obtain permission in advance, using the Letter of Permission form available from Student Services or http://students.sfu.ca/forms.

Please see “Student Enrolment” on page 30 for more information.

Students completing certificates or diplomas should note that each program has its own specific restrictions on the amount of transfer credit permitted. Consult the appropriate Calendar sections for these limitations.

Special transfer credit regulations apply to the bachelor of general studies, bachelor of applied science in engineering science, honors degree programs and to students attending other institutions on formal exchange programs. Refer to the "Faculty of Arts and Social Sciences" on page 130, "Transfer Credit" on page 199, "Faculty of Applied Sciences" on page 109 and "Study Abroad" on page 470.

An applicant with transfer credit is advised that the courses transferred, together with those subsequently taken at Simon Fraser University, must meet the general and specific requirements of the faculty and department in which the student chooses to major or minor. Some awarded transfer credit may be designated "general elective credit." Individual faculties may restrict the amount of general elective credit that may be counted toward a degree. The applicant should not assume that he/she will automatically be granted credit in a subject area, used for courses without a minimum grade of C. (2.0 or 60%).

Individual departments may require students to repeat prerequisite courses for which they have received transfer for a D grade. The repeated courses will show on the student’s permanent record, but double credit will not be granted.

Advanced Standing
Advanced standing is placement to a certain level in a subject area granted on admission. The department concerned examines the applicant’s previous work, or asks the applicant to take a placement test, and then places the applicant at a certain level in the sequence of courses in the department.

Program Approval
Newly admitted students who wish to take either a certificate, post baccalaureate diploma or a further undergraduate degree must obtain program approval from their faculty or department prior to enrolling.

Enrolment Limitations
Examples of recent enrolment limits and resulting admission cut-off averages for admission follow (at time of printing).

<table>
<thead>
<tr>
<th>Term</th>
<th>Minimum Faculty of Arts and Social Sciences Acceptance Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Term 2007</td>
<td></td>
</tr>
<tr>
<td>Basis of Admission</td>
<td>Limit</td>
</tr>
<tr>
<td>BC and Canadian grade 12 graduation</td>
<td>2,742</td>
</tr>
<tr>
<td>BC college transfer</td>
<td>769</td>
</tr>
<tr>
<td>transfers from universities</td>
<td>650</td>
</tr>
<tr>
<td>other</td>
<td>269</td>
</tr>
<tr>
<td>Total</td>
<td>4,430</td>
</tr>
</tbody>
</table>

Completion of minimum requirements does not guarantee admission to any course, program, department or faculty when the number of qualified applicants exceeds the number that, in the opinion of the University, can be accommodated. The University reserves the right to select from among qualified applicants.

Admission and Approval into an Academic Program
Students may apply for academic program admission in one of six faculties: applied sciences, arts and social sciences, business administration, education, health sciences, and science.

Applicants may indicate an alternate program if they are not selected to their first choice program. Normally, this alternate program will be in a different faculty. For example, a first choice may be the BBA program in the Faculty of Business Administration. Due to insufficient space, this is not approved. The second choice is the BSc program in the Faculty of Science. If this is not approved either, the University might choose to offer an alternate admission to a program that the student did not choose. In this example, the student is offered entry to the BA program in the Faculty of Arts and Social Sciences.

The student may enroll in courses, and in a subsequent term, may seek entry to either the BBA or BSc, or may complete a BA in the Faculty of Arts and Social Sciences.
The following admission requirements are extracted from the more complete regulations approved by senate. Authority for interpretation of the regulations rests with the senate committee on undergraduate studies; the University reserves the right to reject or accept any applicant.

All percentages stated are based on a pass mark of 50%. For schools and colleges operating on a pass mark other than 50%, the percentage required for admission is adjusted.

Applicants for off-campus and distance education programs must follow the same application procedures and meet the same requirements as regular on-campus students. Specific details on these programs are available in brochures published each term (see Continuing Studies).

### British Columbia Medical Services Plan
All students must maintain British Columbia Medical Services Plan (BC MSP) while attending Simon Fraser University. The University is not liable for any medical or dental expenses while students are attending Simon Fraser University. Students from outside British Columbia, particularly International and USA students, must obtain Visitors to Canada medical insurance to provide them with coverage for the first 90 days upon arrival in Canada. This 90 day waiting period is required by the BC government in order to process any application for BC MSP and is governed by the BC MSP Act. The BC MSP card will become effective 90 days after your arrival in BC and the temporary Visitors to Canada medical insurance will expire accordingly.

Students from other Canadian provinces must also obtain BC MSP. They should check with their respective provincial medical services plan to verify what coverage would apply until they receive their new BC MSP card.

### English Language and Literacy Admission Requirement
English is the language of instruction at Simon Fraser University. All applicants, regardless of country of origin or citizenship status, will be required to demonstrate competence and literacy in the English language prior to admission. Competence is expected in all four of the following skills: listening, reading, writing, and speaking.

Applicants to undergraduate programs must demonstrate English language competence and literacy in one of the following ways.

- obtain a grade of 60% or better in English 12 or English Literature 12 (BC or Canadian high school); or
- obtain a grade of 60% or better in an equivalent to English 12 or English Literature 12 (BC or Canadian high school) at an eligible international secondary school that uses English as the language of instruction but operates in a country where the primary language is not English; or

<table>
<thead>
<tr>
<th>Note that students with an English 12 or English Literature 12 grade below 75% must satisfy one of the following as a prerequisite to entering certified W courses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>obtain a satisfactory score on a test of English as an additional language for academic purposes (IELTS is preferred). One of the following is required:</td>
</tr>
<tr>
<td>- International English Language Testing System (IELTS) with a minimum score of 6.5 on the Academic Modules; or</td>
</tr>
<tr>
<td>- TOEFL iBT (Test of English as a Foreign Language internet based test) with an overall score of 88 or better with a minimum score of 20 in each of the four components (listening, speaking, writing, reading); or</td>
</tr>
<tr>
<td>- TOEFL CBT (Test of English as a Foreign language computer based test) with a minimum score of 230 including a minimum essay score of 4.5; or</td>
</tr>
<tr>
<td>- TOEFL CBT with a minimum score of 250; or</td>
</tr>
<tr>
<td>- successful completion of the Simon Fraser University Bridge Program (please see English Bridge Program below)</td>
</tr>
</tbody>
</table>

### Quantitative and Analytical Skills Requirement
Simon Fraser University degree programs require specific high school math courses for admission (see the course requirements table on page 21). In all cases, a minimum grade of 60% is required in these courses.

Students with a grade of 60 to 69% in required math courses must also meet one of the following two requirements:

- achieve at least 20 out of 30 in the Quantitative Placement Test taken within their first term at Simon Fraser.
- alternatively (or if they score below 20 in the Quantitative Placement Test) they must achieve at least a C grade in Foundations of Analytical and Quantitative Reasoning (FAN X99-4) taken within the first three terms enrolled at Simon Fraser University (normally 45 units).
exemption from an admission requirement on the basis of a disability should contact the Admissions Office for further details at 778.782.3224. For all other disability-related issues, prospective students are encouraged to contact the Centre for Students with Disabilities directly at 778.782.3112.

**Programs for Mid-Career Adults**
Integrated Studies Programs for mid-career adults are cohort-based, employer-sponsored undergraduate degree completion opportunities leading to the Bachelor of General Studies degree. A flexible admission policy allows recognition of non-traditional learning experiences and a set curriculum enables degree completion within a pre-established time frame — usually three years — while candidates continue to work full time.

Mature applicants with a minimum of 10 years of work experience, and support of their employer to complete an undergraduate degree, are encouraged to consult the Integrated Studies Program web site at [www.sfu.ca/integratedstudies](http://www.sfu.ca/integratedstudies). For information about programs currently available, see “Integrated Studies Program” on page 132.
**British Columbia and Yukon Applicants**

Applicants from British Columbia or Yukon may be admitted from:
- secondary school (see below)
- community or university college (see "Admission from BC and Yukon Community and University Colleges" on page 22)
- another university (see "BC University Transfer" on page 22)

Several special categories of admission also exist for British Columbia applicants (see "Special Categories" on page 23).

**Admission from British Columbia and Yukon Secondary Schools**

All applicants (except as noted) must graduate from secondary school before entering Simon Fraser University.

**Minimum Admission Requirements**

The minimum admission average will vary depending on the number of applications received, and on spaces available. This minimum is determined by the respective faculty, but in no case will be less than 67%.

Actual final percentage marks will be used whenever available. If not given, the following equivalents are used to compute the average (for BC high school admission only): A = 4.0 or 91%; B = 3.0 or 79%; C+ = 2.5 or 70%; C = 2.0 or 64%

If a grade 12 course has a provincial examination, the final mark must include the exam mark.

| Grade 11 (not used to calculate admission average) | English 11 or Français première langue 11  
| English literature 12  
| French or Français langue 12  
| German 12  
| history 12  
| Japanese 12  
| Mandarin 12  
| principles of mathematics 11  
| science 11  
| IB environmental systems 11, principles of physics 11 |

| Grade 12 | English 12 and three provincially examinable grade 12 courses:  
| BC First Nations studies 12  
| English literature 12  
| French or Français langue 12  
| German 12  
| history 12  
| Japanese 12  
| Mandarin 12  
| principles of mathematics 12  
| Punjabi 12  
| Spanish 12  
| Science 12 courses  
| biology 12  
| chemistry 12  
| geography 12  
| geology 12  
| physics 12 |

*IB and AP courses – all standard and higher level IB courses may be used for admission. All AP courses may be used for admission. For IB and AP transfer credit, see “Advanced Placement Program and International Baccalaureate” on page 28.

**Previous Admission Requirements – The above requirements will be effective for admission of applicants to fall 2007, but Simon Fraser University will honor the former five course model until fall 2008 (visit http://students.sfu.ca/admission/requirements/provinces/bc2007.html).**

**BC and Yukon grade 11 and 12 course requirements**

- all applicants must meet the general requirements (see General Requirements below)
- faculty requirements may also apply (see below)
- BC and Yukon secondary school applicants must meet the English language and literacy admission requirement (see "English Language and Literacy Admission Requirement" on page 19), and the quantitative and analytical skills requirement (see "Quantitative and Analytical Skills Requirement" on page 19)

**General Requirements**

**Faculty Requirements**

| Arts and Social Sciences | All programs  
| Applications of mathematics 12 may be substituted for principles of mathematics 11  
| Applicants to the School for the Contemporary Arts programs may have portfolio/audition requirements; visit www.sfu.ca/sca |

| Business Administration |  
| principles of mathematics 12 |

| Education |  
| No direct entry from high school. |

| Health Sciences | All programs  
| principles of mathematics 12 |

| Science | All programs  
| chemistry 11  
| principles of physics 11  
| principles of mathematics 12  
| two other science 12 courses |

| Applied Sciences | Communication  
| applications of mathematics 12 may be substituted for principles of mathematics 11 |

| Computing Science; Geographic Information Science; General Studies | principles of mathematics 12  
| one of biology 12, chemistry 12 or physics 12 |

| Engineering Science | principles of mathematics 12  
| chemistry 12  
| physics 12 |

| Interactive Arts and Technology | principles of mathematics 12  
| one science 12 course |

| TechOne | principles of mathematics 12  
| Kinesiology | principles of mathematics 12  
| two of biology 12, chemistry 12 or physics 12 |

**Additional Information for BC Secondary School Applicants**

**Independent Schools**

The University accepts applications from students attending independent schools adhering to the BC secondary school curriculum. Applicants must have written any secondary school examinations administered by the provincial Ministry of Education in courses used towards graduation. Examination results will be evaluated in the same manner as if the applicant were attending a public secondary school.

**Advanced Placement or International Baccalaureate Exams**

BC secondary school students taking these programs should see “Advanced Placement Program and International Baccalaureate” on page 28.

**BC Adult Graduation Diploma**

This credential is available to adults who take courses to complete graduation through a secondary school, adult education centre or a community college.

Applicants who have completed the diploma and who are at least 19 years of age may be admitted if they have completed:
- four courses (16 units) at grade 11 or advanced level to include English, mathematics, social studies or First Nations, an experimental or laboratory science; a language other than English is not required
- four courses (16 units) at the grade 12 or provincial level to include English and three additional subjects selected from: biology, mathematics, chemistry, English literature, languages, statistics, geography, history, physics

All four grade 12 or provincial level subjects must be graded: a minimum average of C+ or 67% is required, based on the Ministry of Education grading scale, however, a higher average may be required for admission.
Entry requirements for specific programs parallel those for BC secondary school graduates.

**BC Calculus Examination Certificate**

All prospective Simon Fraser University, University of BC, University of Northern BC and University of Victoria students who have completed, or who are enrolled in a secondary school calculus course are eligible to write a calculus challenge exam. Students who pass this exam will receive an Simon Fraser University-UBC-UNBC-Uvic Calculus Challenge Examination Certificate that permits them to obtain calculus transfer credit at one of these universities. Secondary school students can write the exam, which must be done prior to entering one of the four participating BC universities. Only one attempt to write this exam is permitted. The exam’s resulting grade will be converted into the individual university’s equivalent grade. These equivalencies are noted on the certificate.

**Calculus Course Credit**

A student who has passed the calculus challenge exam and is enrolled at Simon Fraser University may be awarded transfer credit: MATH 151 (3). Students already eligible for transfer credit because of high AP or IB scores will keep this eligibility regardless of their examination score and can waive the examination score and/or credit.

**Examination Locations, Schedule**

Each year a university will host the calculus challenge examination. Exams are held twice a year. The April exam is held at participating high schools, or at the host university. The August exam takes place only at the host university.

**Application to Write the Exam**

Application to take the exam must be made to the mathematics department of the university that is hosting the examination in that year.

**Examination Information**

The exam is three hours in duration. For further enquiries about writing the calculus examination and the Calculus Examination Certificate, contact: Math Challenge 151, Department of Mathematics, 8888 University Drive, Simon Fraser University, Burnaby, BC, V5A 1S6; 778.782.3332 Tel; 778.782.4947 Fax; or e-mail fabriuci@sfu.ca.

**Upgrading BC Grade 12 Grades**

Applicants who wish to improve their grades in BC grade 12 courses may do so in accordance with Ministry of Education policies, except that the final grade in a provincially-examinable course may not be increased by taking an equivalent college course. For example, an applicant who has achieved a mark of 66% in principles of mathematics 12 may not count in her/his admission average a subsequent, higher grade (say ‘B’ or 73%) in an ABE provincial level mathematics course taken through a college.

**Admission from BC and Yukon Community and University Colleges**

Guaranteed Admission from BC and Yukon Community and University Colleges

BC and Yukon Community and University College applicants are guaranteed admission to all faculties at Simon Fraser University (except the Faculty of Business Administration) upon completion of at least 24 units of transferable work with a minimum grade point average of 2.5.

College transfer applicants with averages lower than 2.5 will still be considered for admission on a competitive basis as stated below.

Applications who met the University’s admission requirements after completing grade 12 may be admitted on the basis of those requirements, provided that they have attempted fewer than 24 units of transfer credit. However, they will not be admitted if they present three or more transferable courses equal to or more than two transferable courses or with an average of less than 2.0 or 60%.

**Faculty/Program Admission Requirements**

**Arts and Social Sciences, Faculty of**

Students must complete at least 24 units of transferable work with a minimum average of 2.00 or 60%. (Up to 60 units of transfer credit will be awarded for acceptable passed courses.)

**Business Administration, Faculty of**

Students planning to enter the BBA degree program must complete at least 30 units with the equivalents of the following courses passed with a C- grade or higher:

- BUJC 223-4
- BUS 251-3, BUS 272-3
- ECON 103-3, ECON 105-3
- MATH 150-3, MATH 157-3 (or MATH 151-3 or MATH 154-3)
- ENGL 101-3, 103-3, 104-3, 105-3, 199-3, PHIL 100-3, 100-3, 120-3.

Admission is highly competitive. Most transfer students enter the University's Faculty of Arts and Social Sciences before they are approved into the Faculty of Business Administration (see “Business Administration, Faculty of” on page 22).

**Communication, School of**

Admission requirements are the same as those for the Faculty of Arts and Social Sciences (see above). Admission is competitive.

**Computing Science, School of**

Students applying for the computing science program may be admitted directly based on college grades, or may be offered general University admission with the opportunity to apply for later admission based on Simon Fraser University grades.

For direct entry from college, students must complete at least 24 units of transferable credit including seven courses that receive the following transfer credit.

- PHIL 100 or 120 or three units in English
- two of MACTM 101, 201 MATH 151, 152 and 232
- two of CMPT 125, 126, 150, 225, 250 and 275
- three units in Biological sciences, chemistry, earth sciences, kinesiology or physics
- three units in anthropology, archaeology, communication, Canadian studies, criminology, economics, history, human geography, political science, psychology, sociology or women’s studies

Admission will be based on a grade point average calculated on the best seven courses satisfying these requirements. No course may be included in the average if it is considered a duplicate of any course previously taken.

**Engineering Science, School of**

Students planning to enter the BA and BSc degree program in engineering sciences courses with a minimum GPA of 2.50.

**Health Sciences, Faculty of**

Students planning to enter the BA and BSc degree program in health sciences must complete at least 24 units of transferable work.

**Interactive Arts and Technology, School of**

Students must complete at least 24 units of transferable credit.

Kinesiology, School of

Students planning to enter the BSc (Kinesiology) degree program must complete at least 24 units of transferable credit. Admission is competitive.

Applicants are selected based on an admission GPA calculated over the courses taken to receive transfer credit from those listed below. The admission GPA for college students is approximately 3.00, determined by the number of seats available and the number of applications.

For those who cannot complete all requirements at a college, students may apply to Simon Fraser University and complete the internal transfer process (see “Internal Transfer” on page 125).

- BISC 101-4
- MBB 221-3
- CHEM 121-4, 122-2, 281-4
- KIN 142-3
- MATH 151-3, (or 154-3), 152-3 (or 155-3)
- PHYS 101-3, (or 120-3 or 125-3 or 140-4), 102-3, (or 123-3 or 126-3 or 141-4)
- PHYS 153-2, (or 131-2) not required if both of PHYS 140-4 and 141-4 are completed

**Science, Faculty of**

Admission is competitive. Students planning to enter the BSc degree program must have a minimum of 24 units that include the following transfer credit (minimum grade of C+ on each):

- Math 100
- two of BISC 100, CHEM 110 or 111, PHYS 100

**Transfer Credit Guide**

A transfer guide listing all first and second year (lower division) transferable courses and the Simon Fraser University equivalents is accessible through the British Columbia Council on Admissions and Transfer website at www.bctransferguide.ca.

**Associate of Arts/Science Degree Holders**

Graduates holding Associate of Arts or Associate of Science degrees from BC colleges or university colleges recognized by the BC Ministry of Advanced Education will receive preference in the admission process as follows:

- The minimum average for Associate Degree students will be established each term at a level 0.25 GPA points less than that required for regular transfer students, but shall not be less than 2.00.
- Transfer credit will be given for all individually transferable courses. When the individually assigned credit from all sources totals less than 60 units, additional general elective credit will be assigned to bring the transfer credit total to 60 units.

**BC University Transfer**

Applicants in good standing at other recognized BC universities may be admitted on completion of at least 24 units of transferable work with a minimum grade point average of 2.0. Additional requirements are the same as those for students transferring from a BC or Yukon college or university college. The following conditions apply:

- BC university students must meet the English language and literacy, and quantitative and analytical skills requirement. See “English Language and Literacy Admission Requirement” on page 19.

Simon Fraser University 2007 • 2008 Calendar
Special Categories

Simon Fraser University is interested in extending learning opportunities to British Columbia residents who may not qualify under the regular categories of admission. The number of such admissions is limited by the availability of resources, and is not automatic. Four special categories are available — mature student entry, early entry, concurrent studies and irregular admission.

Only Canadian citizens or permanent residents are eligible. Applicants must meet one of the following residency qualifications (documentary evidence should be submitted). They must have

• been born in BC, or
• been a resident of BC for the six months prior to the proposed date of entry to the University, or
• resided in BC for a total of five years at any time.

Mature Student Entry

Applicants aged 23 or older who have attempted less than one year of post-secondary transferable course work, and who do not meet regular admission requirements, may be given consideration as mature students. In addition to normal documents, mature applicants must submit a personal information profile (see “Diverse Qualifications Admission Policy” on page 19). Applicants who have successfully completed some post-secondary work, usually three to four transferable academic courses (9-12 units), and have ensured that they have no background deficiencies in essay writing, mathematics, etc. will receive preference.

The English language and literacy, and quantitative and analytical skills requirements for admission do not apply to mature applicants. However, mature applicants whose first language is not English are expected to meet the English Language and Literacy entrance requirement prior to admission (see “English Language and Literacy Admission Requirement” on page 19).

Mature applicants must meet the writing, quantitative and breadth requirements for graduate (see “Undergraduate Degree Requirements” on page 7). Applicants who have attempted a year or more of transferable post-secondary work (24 or more within BC) are ineligible for mature student entry but may be considered for admission as transfer students.

Concurrent Studies

Students with superior academic records (90% or higher) may apply for limited admission to take one or two university courses while still attending secondary school. Admission is limited to one term, with a maximum of two courses in the term. Credit for these courses may be applied to academic degrees if the student is subsequently admitted to a regular program at the University.

An admission application form for concurrent students is available at http://students.sfu.ca/forms. Applications should be supported by a letter of recommendation from the school principal or designate, and an official copy of the academic record. Admission under this category is at the discretion of the director of admissions and the respective faculty dean.

Irregular Admission (Education)

Applicants may apply for irregular admission, giving limited access to certain courses offered by the Faculty of Education. This category allows certified teachers in BC, who seek professional development opportunities, to avoid long lead times and full documentation of their academic histories. Normal admission deadlines are waived, but published minimum admission requirements apply. Irregular admission students may not pursue a credential at Simon Fraser University (e.g. a degree) and receive no enrollment priority. They may take no more than eight units per term to a maximum of 16 in total. Eligibility to re-enroll after each term is subject to the approval of the Faculty of Education. For further information, contact the Faculty of Education at 778.782.5830.
Applicants from Other Canadian Provinces

Those applying from a Canadian college should see "Applicants from Canadian Colleges" on page 25. BC applicants should see "British Columbia and Yukon Applicants" on page 21. See page 28 for International Baccalaureate and Advanced Placement programs.

Canadian High Schools

Applicants from Canadian high schools outside of British Columbia and Yukon will be considered for admission on the basis of their academic program leading to high school graduation and university entrance. Students will be required to present English at the senior level and all required courses for their intended university program.

Completion of high school graduation from a recognized secondary school is mandatory and a minimum average of 67% or equivalent is required. Because of enrolment limitations, the academic average that is required for most programs is higher than 67%.

Canadian High School Requirements

Ontario
Applicants from Ontario must present an Ontario secondary school diploma with a minimum of six 4U/4M courses, including ENG4U.

Quebec
CEGEP Students
Applicants from CEGEP must present either a completed DEC or at least one year of an approved academic program.

Grade 12 Students
These applicants must present a grade 12 graduation diploma with standing in a minimum of six appropriate academic grade 12 courses, including English.

Alberta, Saskatchewan, Manitoba, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, Northwest Territories, Nunavut
Applicants from these provinces must present a grade 12 graduation diploma with standing in a minimum of five appropriate academic grade 12 courses, including English.

Detailed information about appropriate academic courses is not presented in this Calendar because the list is regularly updated. To see the most recent course list, please visit http://students.sfu.ca/admission

Specific Faculty Requirements

The following specific Faculty requirements are expressed in BC/Yukon terms. Simon Fraser University’s Undergraduate Admissions will determine course equivalency. These requirements are in addition to those listed above for each province.

Faculty of Applied Sciences
School of Communication
• applications of mathematics 12 may be substituted for principles of mathematics 11

School of Computing Science, Geographic Information Science
• principles of mathematics 12
• one of biology 12, chemistry 12, physics 12

School of Engineering Science
• principles of mathematics 12
• chemistry 12
• physics 12

School of Interactive Arts and Technology
• principles of mathematics 12
• one science 12 course

School of Kinesiology
• principles of mathematics 12
• two of biology 12, chemistry 12, physics 12

TechOne Program
• principles of mathematics 12

Faculty of Arts and Social Sciences
For all programs,
• applications of mathematics 12 may be substituted for principles of mathematics 11
• applicants to the School for the Contemporary Arts may have portfolio and/or audition requirements; for further information, please visit www.sfu.ca/sca

Faculty of Business Administration
• principles of mathematics 12

Faculty of Education
(no direct entry from high school)

Faculty of Health Sciences
All programs require
• principles of mathematics 12

Faculty of Science
All programs require
• chemistry 11
• principles of physics 11
• principles of mathematics 12
• two other science 12 courses
Applications from Canadian Colleges

The following requirements refer to admission to the Faculty of Arts and Social Sciences, except where otherwise stated.

Applicants who have attended a community college in an articulated university transfer program must complete at least one full year (30 units) of transferable work with a minimum average of 2.0 or 60%.

Applicants who met the University's admission requirements after completing grade 12 may be admitted on the basis of those requirements, provided that they have attempted less than 30 units of transfer credit. However, they will not be admitted if they present three or more transferable courses equal to nine or more units with an average of less than 2.0 or 60%.

English Language and Literacy requirements, and Quantitative and Analytical Skills requirements apply to Canadian College transfer students on a university transfer program seeking entry to degree programs (see "English Language and Literacy Admission Requirement" on page 19 and "Quantitative and Analytical Skills Requirement" on page 19).

Other requirements are parallel to those for BC college transfer students (see "Admission from BC and Yukon Community and University Colleges" on page 20), except that associate degrees are given no special priority.

Transfer credit may be granted to a maximum of 60 units based on approved transfer lists or on the advice of the appropriate Simon Fraser University departments.

Quebec CEGEP

Applicants from CEGEP must present either a completed DEC or at least one year of an approved academic program. The minimum average is 70%.

Contact Admissions, Student Services, for information.

CEGEP students must meet the English Language and Literacy, and Quantitative and Analytical Skills requirement (see "English Language and Literacy Admission Requirement" on page 19 and "Quantitative and Analytical Skills Requirement" on page 19).

Institutes of Technology/Colleges of Applied Arts and Technology

Students with completed two or three year diplomas from academic programs at Canadian institutes of technology, including BCIT, or colleges of applied arts and technology may be admitted with an average of 65%. Transfer credit may be granted based on overall academic background and on the recommendations of the appropriate departments at Simon Fraser University. Transfer credit is generally granted only for completed technical programs as a block and is not evaluated on a course by course basis.

Applicants from institutes of technology/colleges of applied arts and technology must meet the English Language and Literacy, and Quantitative and Analytical Skills requirement (see "English Language and Literacy Admission Requirement" on page 19 and "Quantitative and Analytical Skills Requirement" on page 19).

Canadian University Transfer

Applicants in good standing at other recognized Canadian universities may be admitted on completion of at least one full year (30 units) of transferable work with a minimum 60% (2.0) average. Other requirements are the same as those for students transferring from a BC community or university college. The following conditions apply:

• students must meet the English Language and Literacy, and Quantitative and Analytical Skills requirements (see "English Language and Literacy Admission Requirement" on page 19 and "Quantitative and Analytical Skills Requirement" on page 19).

• studies must have been at a fully accredited institution granting baccalaureate or higher degrees

• applicants who have been required to withdraw from the transferring institution or whose status, if they were attending Simon Fraser University, would be on academic probation will be admitted only if they have completed a further year (30 units) or more of transferable work, with a GPA of at least .50 points above the admission GPA.

• Simon Fraser University supports the Pan-Canadian Protocol on transferability of first and second year arts and science courses from any recognized Canadian university.

Applicants must send copies of detailed course outlines to assist with the evaluation of transfer credit.

Canadian Visiting Students

Students of other Canadian universities may apply for admission to take specified courses for subsequent transfer back to the ‘home’ university. Applicants should apply in the normal manner and will be evaluated as University transfer applicants (see above). No transfer credit or enrollment priority is awarded to visiting students.

Canadian University Degree Holders

Applicants holding degrees from a recognized Canadian University outside of BC may be admitted to undergraduate studies to undertake a second or subsequent degree at the bachelor’s level, or to undertake a diploma or certificate. Applicants may also gain admission as special students to take undergraduate courses which are not for credit toward a degree, diploma or certificate program. Applicants with baccalaureate degrees from recognized universities will be admitted with a minimum average of 2.0 or 60% based on the last two years of degree (or post degree) work attempted.

Applicants to a degree program must meet the English language and literacy, and quantitative and analytical skills requirements. See "English Language and Literacy Admission Requirement" on page 19 and See "Quantitative and Analytical Skills Requirement" on page 19.

International Applicants

International applicants may be admitted from secondary school, from a college, from a university, or applicants may already hold a university degree. Refer to those sections that follow.

Some schools offer programs that comply with international rather than national rules (i.e. International Baccalaureate, European Baccalaureate, etc.). Students from these schools will be evaluated by international standards.

Some schools offer an educational program that is different from the traditional program in that country – for example, a US 12 program in Saudi Arabia. In this case, please refer to the United States admission requirements.

International applicants must meet the English Language and Literacy, and Quantitative and Analytical Skills requirements (see “English Language and Literacy Admission Requirement” on page 19 and “Quantitative and Analytical Skills Requirement” on page 19).

Other Requirements

Medical Insurance

All students admitted to Simon Fraser University must have medical insurance. See “British Columbia Medical Services Plan” on page 19.

Academic Documents

Students must arrange to send official transcripts of academic records from all schools and colleges attended to Simon Fraser University. Replaceable documents will not be returned. Irreplaceable documents will be returned to the student personally, on request. If the student's documents are not in either English or French, Simon Fraser University requires an official translation, certified by an educational official of the student's country, an official of a Canadian Education Centre, or a Canadian consul or embassy official. Translations made by the student, relatives or friends will not be accepted.

For international applicants residing in BC, translations should be completed by a member of the Society of Translators and Interpreters of British Columbia (please view their website at www.stbic.org), or through MOSAIC Translation Services at www.mosaic-trans.com.

Secondary School Applicants

Requirements by Region

Africa

Egypt

Kenya

Nigeria

South Africa

South Africa

Argentina

Bachillerato/Bachiller or Bachillerato Especializado on an academic program with a minimum score of 7/10 (good), but normally 8/10 (superior) is required.
Admission and Readmission

Applicants who have also written university entrance exams should arrange for these results to be sent to us with accompanying interpretive information.

Brazil
Certificado de Conclusao de Ensino Medio with a minimum score of 7/10, but normally require 8/10 plus results of Concurso Vestibular (university entrance exam) or ENEM (Middle Education National Examination).

Chile
Licencia De Educacion Media Secundaria with a minimum score of 4/7 (average), but normally require 5/7 (very good) plus results of Prueba de Aptitud Academica (PAA).

Colombia
First Year completed at a recognized university.

Costa Rica
Bachillerato or Certificado de Conclusao de Estudios Primarios on an academic program with a minimum average of 67%, but normally require 85% plus results of University and Entrance Examinations.

Czech Republic

Denmark
Kotogakko Sotsugyo Shomeisho (Upper Secondary School Leaving Certificate) on an academic program, plus Universities and Entrance Examinations.

Ecuador
Bachillerato or Titulo de Bachiller with a minimum score of 8 (80), but normally require 8.5 (85). Note – grading system is 0–100 or 0–10.

Guatemala
Bachillerato on an academic program with a minimum average of 67%, but normally require 85% plus results of University and Entrance Examinations.

Mexico
Bachillerato/Bachiller on an academic program with a minimum of 7/10, but normally require 8/10 plus results of University Entrance Examinations. Applicants who have also written university entrance exams should arrange for these results to be sent to us with accompanying interpretive information.

Paraguay
Bachillerato on an academic program with a minimum score of 3.5/5, but normally require 4/5 plus results of University and Entrance Examinations.

Peru
Bachillerato with a minimum score of 12, normally require 14/20 plus results of University and Entrance Examinations. (Twelve years of academic preparation is required.)

United States
Graduates of US secondary school programs will be considered on a combination of factors including grade 11 and 12 academic courses, test scores (SAT/ACT), rank in class, advanced academic course work (e.g. AP, IB). Please visit http://students.sfu.ca/admission/requirements/international/usa.html for details.

Uruguay
Bachillerato on an academic program with a minimum score of 5/12, but normally require 10/12.

Venezuela
First year standing at a recognized university with a minimum score of 15, but normally require 17/20.

Asia
Bangladesh
Higher Secondary Certificate (HSC)/Intermediate Certificate with a minimum second division standing (45%-59%/8), but normally first division standing (60%-100%/A) is required.

Brunei
Brunei/Cambridge GCE Advanced Level with a minimum of 18 points (transferable or non-transferable), but normally require 20 points for Arts, 18 points for Science, and others evaluated by faculty/department.

Hong Kong
(Special Administrative Region of China)
Hong Kong Advanced Level Examination (HKALE) with a minimum of 18 points on A levels (transferable or non-transferable) but normally require 20 points for Arts and Social Sciences, 18 points for Science and others evaluated by faculty/department. Advanced Level point system: add the points from A level subjects, using the following values.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Level</th>
<th>Points</th>
<th>Grade</th>
<th>Level</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>18</td>
<td>B</td>
<td>B</td>
<td>16</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>18</td>
<td>B</td>
<td>B</td>
<td>16</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>18</td>
<td>B</td>
<td>B</td>
<td>16</td>
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<tr>
<td>A</td>
<td>A</td>
<td>18</td>
<td>B</td>
<td>B</td>
<td>16</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>18</td>
<td>B</td>
<td>B</td>
<td>16</td>
</tr>
</tbody>
</table>

India
Admission is based on the Indian state in which the academic program was offered; the type of academic institution that offered the program (e.g. private, public, national or international, etc.); and when the program was completed. Twelve years of academic preparation is required. One of Indian Senior School Certificate (ISC), Intermediate Certificate, Higher School Certificate, Higher Secondary School Certificate (HSSC) or All India Senior School Certificate awarded after Standard XII with a minimum Second Division/Class Standing is required. A Statement of Marks with a minimum of 60% (A/60% – 100%) is also required, although 70% is normally required for admission.

Indonesia
Surat Tanda Lulusan Menengah Umum on an academic program with a minimum score of 7/10, but normally require 8/10 plus results of Ebtanas.

Japan
Kotagakko Sotsugyo Shomeisho (Upper Secondary School Leaving Certificate) on an academic program with a minimum grade of 3/5 on academic subjects but normally require 3.5/5 for admission.

Korea (Republic of)
Immunegeusun Kodang Hakhyo Choeuchang (Academic Upper Secondary School Certificate) with a minimum average of 70% (C), but normally require 80% (B). Require either the results of the Scholastic Achievement Examination for College Entrance (SAECE) or the Academic Aptitude Test (AAT).

Note: Students who have completed the Junior College Diploma will be evaluated on an individual basis.

Malaysia
Sijil Tinggi Persekolahan Malaysia (STPM) (Malaysian Higher School Certificate); MICSS Unified Examination Certificate (UEC) with a minimum C+ (60%) on five academic subjects, but normally require B (70%).

Pakistan
Intermediate (IC) or Higher School Certificate (HSC) with a minimum average of C (50-59; Good), but normally require a B (60-69; Very Good).

People’s Republic of China
Senior Middle School Graduation Diploma with superior standing plus a competitive score of at least 63% in the National College Entrance Examinations (NCEE).

Philippines
High School Graduation Diploma (10 years) plus two years of university study with a minimum average of C, but normally require B. Students with more than 10 years of academic preparation will be evaluated on an individual basis.

Singapore
Singapore General Certificate Examination Advanced Level (A Level) with a minimum of 18 points (transferable or non-transferable) for Arts or Science. Advanced Level point system: add the points from A level subjects, using the following values.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Level</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>8</td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td>6</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
<td>4</td>
</tr>
</tbody>
</table>

Taiwan
Senior High School Certificate of Graduation on an academic program with a minimum B (70%) standing on an academic program, plus Universities and College Joint Entrance Examination. Senior secondary education must have been completed at a senior high school, not a senior vocational school.

Thailand
Mathayom 6 (6B) (Secondary School Certificate) with minimum 2/4, but normally require 3/4 plus results of written entrance examinations.

Europe
Cyprus
Aptilirion of Lykeion or Lise Bitirme Diplomasi (High School Graduation)

Czech Republic
Vysvedceni o Maturitni Zкосuce (Maturita) or Maturitni Vysvedceni with a minimum score of 3.5 (maximum 4.0), but normally require 3 (maximum 3.3).

Denmark
Studenteksemen or Højere Forberedelseseksamen or Højere Handelseksamen (leaving exam taken at a Gymnasium; also called the university entrance exam) with a minimum score of 8/13, but normally require 10/13.

France
Baccalauréat de l’Enseignement du Second Degré (Baccalauréat Part II) or Diplôme de Bachelor de l’Enseignement du Second Degré with a minimum standing of 12/20 (assez bien), but normally require 10/20 (bien).

Germany
Abitur, Reifezeugnis or Zeugnis der Allgemeinen Hochschulreife with a minimum score of 3.5 (maximum 4.0) in the Abitur, but normally require 2.5 (maximum 3.0).

Greece

Hungary
Erettségi/ Erettségi Bizonyítvart certificate with a minimum score of 3.5/5, but normally require 4/5.

Ireland, Republic of
Leaving Certificate with a minimum average of C+, but normally require B+.
Italy
Maturita Classica Diploma or Maturita Scientifica Diploma with a minimum score of 40/60, but normally require 50/60.

Netherlands
Voorbereidend Wetenschappelijk Onderwijs (VWO Diploma) with a minimum score of 6/10, but normally require 8/10.

Norway
Vitnemål Fra Dervidergående Skole (Certificate of Upper Secondary Education); Vitnemal Videregående Oplæring on an academic program with a minimum score of 3/6, but normally require 4/6.

Russian Federation
Svidetel’stvo Srednem Obrazovanii (Certificate of Secondary Education) or Attestat O Polnom Srednem Obrazovaniu (Upper Secondary Education) with a minimum score of 3.5/5, but normally require 4/5 plus results of University Entrance Examinations.

Scotland
Scottish Leaving Certificate at the Higher Level (4 subjects) with a minimum C average on three Advanced level subjects, but normally require a C+ average or the Scottish Universities Preliminary Examination with higher grades.

Sweden
Avgångsbetyg/Fullständigt Slutbetyg from a Gymnasieskolan.

Switzerland
Maturatszeugnis, Certificat de Maturite, Baccalaureat, Attestato di Maturita or Federally recognized Cantonal Maturity Certificates with good grades (different grading scales used: 1-6, maximum 6; 1-10, maximum 10; or 6-1, maximum 1).

Ukraine
Atestat Pro Povnu Zagal’nu Sersdniu Osvitu (Upper Secondary Education) or Attestat O Polnom Srednem Obrazovaniu (Secondary Education) or Attestat O Polnom Srednem Obrazovaniu (Upper Secondary Education) with a minimum average of 67%, but normally require 4/5 plus results of University Entrance Examinations.

All Other Countries
If your country is not listed above, please email international-recruitment@sfu.ca.

International University or College Transfer
The studies presented for transfer credit must be acceptable to a leading university in the home country toward a program similar to the one to which admission is sought. For further requirements, see “Canadian University Transfer” on page 25.

International Institutes of Technology
Students with completed two or three year diplomas from academic programs at recognized international institutes of technology may be admitted with an average of 65%. Transfer credit may be granted based on overall academic background and on the recommendations of the appropriate departments at Simon Fraser University. Transfer credit is generally granted only for completed technical programs as a block and is not evaluated on a course-by-course basis. International applicants must meet the English Language and Literacy, and Quantitative and Analytical Skills requirements (see “English Language and Literacy Admission Requirement” on page 19).

International University Degree Holders
See “BC University Degree Holders” on page 23.
Advanced Placement Program and International Baccalaureate

Advanced Placement (AP) and International Baccalaureate (IB) courses may be used in place of equivalent provincially-approved grade 12 courses as listed under “British Columbia and Yukon Applicants” on page 21. The chart on the right shows how AP and IB exam grades will be converted for the purpose of determining a student’s admission.

Transfer credit and/or advanced standing will be granted to students who complete AP examinations, in certain transferable subjects, with grades of 4 or 5. Course challenge (credit by examination) is also available in some disciplines.

A student who has completed the IB diploma will typically be admitted subject to a minimum overall score of 28. Simon Fraser University grants transfer credit for some higher level subjects that are passed with a grade of 4 or higher, to a maximum of 30 units. We do not grant transfer credit for subsidiary level subjects. In some cases students who will not complete a full IB diploma program may be admitted subject to a minimum overall score of 28. Simon Fraser University grants transfer credit for some higher level subjects that are passed with a grade of 4 or higher, to a maximum of 30 units.

<table>
<thead>
<tr>
<th>AP Exam Grade</th>
<th>IB Exam Grade</th>
<th>Equivalent Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>7</td>
<td>96</td>
</tr>
<tr>
<td>–</td>
<td>6</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>86</td>
</tr>
<tr>
<td>3</td>
<td>–</td>
<td>80</td>
</tr>
<tr>
<td>–</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>70</td>
</tr>
</tbody>
</table>

Note: These topics are not covered in AP physics C but are in PHYS 120 and 121: heat, kinetic theory, thermodynamics, wave motion, interference, diffraction, geometric optics and some topics in modern physics and special relativity.

<table>
<thead>
<tr>
<th>Advanced Placement Program Transfer Credit</th>
<th>SFU Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP Examination</td>
<td>SFU Recognition</td>
</tr>
<tr>
<td>Art: studio art — drawing portfolio</td>
<td>FPA 1XX (6) Visual Art</td>
</tr>
<tr>
<td>Art: studio art — 2D design</td>
<td>FPA 1XX (3) Visual Art Studio</td>
</tr>
<tr>
<td>Art: studio art — 3D design</td>
<td>FPA 1XX (6) Visual Art Studio</td>
</tr>
<tr>
<td>biology</td>
<td>BISC 101 (4), B-Sci, 102 (4) B-Sci</td>
</tr>
<tr>
<td>calculus AB</td>
<td>MATH 151 (3) Q</td>
</tr>
<tr>
<td>calculus BC</td>
<td>MATH 151 (3) Q, 152 (3) Q</td>
</tr>
<tr>
<td>chemistry</td>
<td>CHEM 121 (4) Q/B-Sci, 122 (2) Q</td>
</tr>
<tr>
<td>computer science A</td>
<td>CMPT 120 (3), Q/B-Sci, CMPT 1XX (3)</td>
</tr>
<tr>
<td>computer science AB</td>
<td>CMPT 120 (3), Q/B-Sci, CMPT 125 (3) Q</td>
</tr>
<tr>
<td>economics: macroeconomics or microeconomics</td>
<td>ECON 103 (3) Q/B-Sci or ECON 105 (3) Q/B-Sci</td>
</tr>
<tr>
<td>English language and composition</td>
<td>ENGL 1XX (3)</td>
</tr>
<tr>
<td>English literature and composition</td>
<td>ENGL 1XX (3)</td>
</tr>
<tr>
<td>environmental science</td>
<td>BISC 1XX (3)</td>
</tr>
<tr>
<td>European history</td>
<td>HIST 106 (3) B-Hum</td>
</tr>
<tr>
<td>French language</td>
<td>FREN 1XX (3) or 1XX (6) depending on placement test</td>
</tr>
<tr>
<td>French literature</td>
<td>FREN 1XX (3)</td>
</tr>
<tr>
<td>German language</td>
<td>GERM 102 (4) with a score of 4, or GERM 102 (4), 103 (4) with a score of 5</td>
</tr>
<tr>
<td>government and politics: comparative</td>
<td>POL 100 (3) B-Soc</td>
</tr>
<tr>
<td>government and politics: United States</td>
<td>POL 232 (3) B-Soc</td>
</tr>
<tr>
<td>history of art</td>
<td>FPA 167 (3) B-Hum, FPA 1XX (3) Visual Art History</td>
</tr>
<tr>
<td>human geography</td>
<td>GEOG 100 (3) B-Soc</td>
</tr>
<tr>
<td>Latin literature</td>
<td>HUM 162 (3)</td>
</tr>
<tr>
<td>Latin: Vergil</td>
<td>HUM 161 (3)</td>
</tr>
<tr>
<td>music theory</td>
<td>FPA 104 (3), FPA 1XX (3) Music Studio</td>
</tr>
<tr>
<td>physics B</td>
<td>PHYS 101 (3) Q/B-Sci, 102 (3) Q/B-Sci</td>
</tr>
<tr>
<td>physics C</td>
<td>PHYS 120 (3) Q/B-Sci, PHYS 121 (3) Q/B-Sci, see note below</td>
</tr>
<tr>
<td>psychology</td>
<td>PSYC 100 (3) B-Soc, 102 (3) B-Soc</td>
</tr>
<tr>
<td>Spanish language</td>
<td>advanced standing in SPAN 303</td>
</tr>
<tr>
<td>Spanish literature</td>
<td>advanced standing in SPAN 240, SPAN 103</td>
</tr>
<tr>
<td>statistics</td>
<td>STAT 101 (3) Q</td>
</tr>
<tr>
<td>United States history</td>
<td>HIST 1XX, group 2 (3)</td>
</tr>
<tr>
<td>world history</td>
<td>HIST 1XX, group 3 (3)</td>
</tr>
</tbody>
</table>

International Baccalaureate Transfer Credit

<table>
<thead>
<tr>
<th>IB Examination</th>
<th>Level</th>
<th>SFU Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>biology: general</td>
<td>HL</td>
<td>BISC 101 (4) B-Sci, 102 (4) B-Sci</td>
</tr>
<tr>
<td>business and management</td>
<td>HL</td>
<td>individual assessment</td>
</tr>
<tr>
<td>chemistry</td>
<td>HL</td>
<td>CHEM 121 (4) Q/B-Sci, 122 (2) Q</td>
</tr>
<tr>
<td>classical languages</td>
<td>HL</td>
<td>individual assessment</td>
</tr>
<tr>
<td>computer science</td>
<td>HL</td>
<td>CMPT 120 (3) Q/B-Sci, CMPT 1XX (3)</td>
</tr>
<tr>
<td>dance</td>
<td>HL</td>
<td>(to be announced)</td>
</tr>
<tr>
<td>design technology</td>
<td>HL</td>
<td>(to be announced)</td>
</tr>
<tr>
<td>economics</td>
<td>HL</td>
<td>ECON 103 (3) Q/B-Soc, ECON 105 (3) Q/B-Soc</td>
</tr>
<tr>
<td>English language A</td>
<td>HL</td>
<td>ENGL 101 (3) B-Hum, ENGL 1XX (3)</td>
</tr>
<tr>
<td>film</td>
<td>HL</td>
<td>FPA 237 (3), FPA 1XX (3) Film Studio</td>
</tr>
<tr>
<td>geography</td>
<td>HL</td>
<td>GEOG 100 (3) B-Soc, 111 (3) B-Sci</td>
</tr>
<tr>
<td>history</td>
<td>HL</td>
<td>HIST 225 (3) B-Hum, HIST 1XX (2)</td>
</tr>
<tr>
<td>history: Islamic</td>
<td>HL</td>
<td>HIST 1XX (3)</td>
</tr>
<tr>
<td>informational technology in a global society</td>
<td>HL</td>
<td>CMPT 1XX (6)</td>
</tr>
<tr>
<td>language A (various)</td>
<td>HL</td>
<td>LANG 1XX (6) – name of Language A except for English Language A = ENGL 101 (3) B-Hum, ENGL 1XX (3)</td>
</tr>
<tr>
<td>language B (various)</td>
<td>HL</td>
<td>LANG 1XX (6) – name of Language B except for English Language B = no credit French Language B = FREN 1XX (3) or 1XX (6) depending on placement test Italian B = ITAL 100 (3), ITAL 101 (3)</td>
</tr>
<tr>
<td>mathematics</td>
<td>HL</td>
<td>MATH 151 (3) Q, MATH 152 (3) Q, MATH 1XX (3) with a score of 6 or better</td>
</tr>
<tr>
<td>music</td>
<td>HL</td>
<td>individual assessment</td>
</tr>
<tr>
<td>philosophy</td>
<td>HL</td>
<td>PHIL 1XX (6)</td>
</tr>
<tr>
<td>physics</td>
<td>HL</td>
<td>PHYS 101 (3) Q/B-Sci, 102 (3) Q/B-Sci</td>
</tr>
<tr>
<td>psychology</td>
<td>HL</td>
<td>PSYC 100 (3) B-Soc, 102 (3) B-Soc</td>
</tr>
<tr>
<td>social and cultural anthropology</td>
<td>HL</td>
<td>SA 101 (4) B-Soc, SA 1XX (4)</td>
</tr>
<tr>
<td>theatre arts</td>
<td>HL</td>
<td>FPA 1XX (3) theatre, FPA 150 (3)</td>
</tr>
<tr>
<td>visual art</td>
<td>HL</td>
<td>FPA 1XX (6)</td>
</tr>
</tbody>
</table>
Reactivation and Readmission

Students who have previously attended, who have completed at least one term at Simon Fraser University may apply for reactivation (formerly referred to as “re-registration”), or apply for readmission.

Reactivation

If you meet the following criteria:

• absent from the University for three or more consecutive terms and were not required to withdraw in your last term at Simon Fraser University, and completed no further academic studies at a post-secondary institution during the time away from Simon Fraser University; or
• required to withdraw or placed on extended withdrawal from Simon Fraser University; or
• voluntary withdrawal from your first term of attendance. If you are a new student who withdraws before completing any course work, you are required to apply for readmission if you wish to enroll in a subsequent term. (This does not apply if you withdraw under extenuating circumstances, after the application deadline for the subsequent term); or
• you are a concurrent studies student who completes a term and wishes to continue at the University; or
• you previously attended as a visiting or exchange student and now wish to complete a Simon Fraser University credential.

If any of these conditions are present, you must apply for readmission by filling out the regular application form on-line at students.sfu.ca/pas/admissions.html by the applicable application deadlines.

Holdes of Simon Fraser University Bachelor's Degrees

In addition to submitting an application for readmission or reactivation, former Simon Fraser University students who plan to undertake a program of study leading to an additional bachelor's degree or toward a diploma are urged to obtain program approval from the appropriate department and faculty as soon as possible. Such students entering certificate programs should obtain approval from their faculty advisors.

Students holding Simon Fraser University bachelor's degrees may also apply for reactivation to undertake undergraduate courses as special students if no further academic studies at a post-secondary institution during the time away were completed. Normally, no approval is required.

Readmission of Involuntarily Withdrawn Students

A former student who is involuntarily withdrawn from the University (required to withdraw or placed on extended withdrawal) may apply for reactivation based on performance achieved in external academic course work completed after she/he last enrolled at Simon Fraser University (see below for details).

Readmission after Required to Withdraw

A former student who is required to withdraw (RTW) shall be eligible for readmission if she/he completes externally further transferable academic work according to the following schedule (any of the following five options):

• 12-17 units with a minimum 3.50 GPA
• 18-23 units with a minimum 3.00 GPA
• 24-29 units with a minimum 2.75 GPA or with the acceptance GPA (see Acceptance GPA below) whichever is higher
• 30 or more units with the acceptance GPA (see Acceptance GPA below)
• a completed 2 year technical diploma with a 70% minimum average and at least 12 units of transferable course work with a minimum 2.75 GPA. (The transferable work may be within the diploma program or supplementary to it.)

Acceptance GPA

The acceptance GPA refers to the minimum admission GPA in effect for that term for British Columbia college transfer students, according to enrolment limitation measures. The acceptance GPA may vary.

Readmission Deadlines

Deadlines for consideration shall be the same as for other students seeking readmission (see “Application Deadlines” on page 18).

Duplicate Courses for Readmission

A repeated course attempt which was passed with a C grade or higher prior to leaving Simon Fraser University will not count in the unit or GPA calculations for readmission.

Final Grades Evaluated for Readmission

Evaluation for readmission is based only on final grades (i.e. courses in progress are not evaluated).

Transfer Credit on Readmission

Credit for transferable courses shall be granted on readmission, subject to a C minimum grade in each course, and subject to normal transfer credit limits.

Standing on Readmission

If readmitted, a student who was previously involuntarily withdrawn from the University (RTW or PW) shall again be subject to the conditions described above.
Student Enrolment

Enrollment is the process of formally assigning and recording student’s enrolment in a course(s). Enrollment is open only to those who have been admitted or readmitted to the University, or who are eligible for reactivation. An exception is that special audit students need not be formally admitted before enrollment (see “Special Audit Student” on page 235).

Under the trimester system a student must enroll for each semester, term, or session of attendance with the exception of the summer session, intersession and summer term, which may be combined. Students are given access to the enrollment system based on the student’s cumulative grade point average and on the number of hours completed and in progress. Students are assigned an appointment date and time from which access is activated.

Note: The enrollment procedure for designated off-campus programs and distance education courses is the same as for on-campus courses. Specific program details are available in brochures published each term. For further information see “Continuing Studies” on page 235.

Information about how to enroll and details about the day, time, place and instructor for courses is provided in the Undergraduate Schedule of Classes and Examinations and on the web at http://students.sfu.ca/gosfu. The University reserves the right to change arrangements without notice although it will endeavor to inform students affected by such changes.

Library/Identification Card

A student library/identity card is provided to enrolled or enrolled students. This card is required when borrowing books from the Library and for other on-campus identification purposes. In the event that this card is lost, destroyed or damaged, a replacement card may be obtained from Student Services upon payment of a fee.

Academic Advising and Student Success

3200 Maggie Benston Student Services Centre, 778.782.4366 Tel, 778.782.4969 Fax, acadvice@sfu.ca, http://students.sfu.ca, Monday to Thursday 9 am – 6 pm, Friday 10 am – 4:30 pm

Academic Advising and Student Success provides advice for newly admitted and continuing first and second year students who have not declared a specialization (a term used to describe a major, minor, double major, joint major or an honors program [see “Degree Requirements” on page 6]). Academic advisors, both professionals and student peers, assist with course selection and program planning in any of our six faculties (Applied Sciences, Arts and Social Sciences, Business Administration, Education, Health Sciences, and Science).

Special advisors who assist students in academic difficulty are trained to provide assistance about policies related to academic standing and continuance, course withdrawals, readmission after being required to withdraw due to poor academic performance, and retroactive withdrawals applications.

Definitions

The following is a list of the most commonly used terms that new students can find confusing:

- Definitions are grouped under Students, the Academic Year, and Courses.
- Students
  - Simon Fraser University does not classify students as either full time or part time although there are varying course load requirements for many types of financial aid. See “Financial Aid and Awards” on page 41.
  - Continuing Students
    - Students who enrolled for one or more of the last three terms and who are eligible to continue will be advised of enrollment procedures and deadlines well in advance of each term.
  - Former Students
    - Under certain conditions, former students submit formal application for readmission in order to continue academic studies at the University (see “Admission and Readmission” on page 17).
  - New Students
    - After the application for admission has been assessed, the applicant will be advised of admission. If admitted, the student receives instructions on the procedure to enroll for courses.
  - Qualifying Student
    - See “1.3.6 Admission as a Qualifying Student” on page 244.
  - Regular Student
    - A regular student is one proceeding to a degree, diploma or certificate in any faculty. A regular student may already hold one or more bachelor’s degrees.
  - Special Audit Student
    - Students who do not apply for University admission under the general admission regulations but who wish to audit credit courses may be given entry as special audit students. Special application procedures apply; see “Special Audit Student” on page 235.
  - Special Student
    - A student already holding a first degree may, as a special student, enrol in undergraduate courses only. Credit for these courses may not be applied toward completion of any certificate, diploma, undergraduate or graduate credential at Simon Fraser University. First time applicants wishing to enrol as special students and students holding a first degree who have previously attended Simon Fraser University should see “Admission and Readmission” on page 17.
  - Visiting and Exchange Students
    - A visiting student is a bona fide student of another accredited institution who is permitted to take credit courses only toward a degree, certificate or diploma at the home institution. Applicants who wish to become visiting students must meet all admission requirements and must submit a letter of permission from the registrar of the home institution. A visiting student wishing to become a regular Simon Fraser University student must reapply and meet admission requirements in effect at that time.

Academic Year

- Trimester
  - Simon Fraser University offers three full semesters or terms within the twelve month calendar year.
  - Term
    - The calendar year is divided into three academic terms of 16 weeks each. Each term has its own enrollment and final examinations. All academic courses in this Calendar are one term long or fall into one of the shorter sessions, such as intersession or summer session. Students may enter at the beginning of any term and attend one, two or three terms in a year. By attending continuously, it is possible for a student who entered from BC high school grade 12 (or equivalent) in the fall 2005 term to graduate with a bachelor’s degree at the end of the spring 2008 term. Terms are referred to by numbers or by names:
      - Term 1 – spring, January to April, (2007-1)
      - Term 2 – summer, May to August, (2007-2)
      - Term 3 – fall, September to December, (2007-3)

To increase the accessibility of the summer program (May-August) to teachers and others, the summer term is enriched by two, two-month sessions, namely intersession (May-June) and summer session (July-August). These programs are offered in addition to the regular four month summer term.

The following illustrates an academic year at Simon Fraser University:

fall term: September – December
spring term: January – April
intersession: May – August
summer session: July – August

Term Codes

The PeopleSoft student administration system used at Simon Fraser uses numeric codes for semesters. Students will often encounter these codes when using go.sfu.ca, the on-line student services portal. Here are the term codes for the upcoming year:

- 1077 = fall 2007
- 1081 = spring 2008
- 1084 = summer 2008

The codes can be interpreted as follows:

- 1 represents the 21st century
- 07 = year
- the final digit is the term: 1 for spring, 4 for summer and 7 for fall.

Levels

Undergraduates in Canada are traditionally classified as first year (Freshman), second year (Sophomore), third year (Junior), or fourth year (Senior) students. Since ‘year’ does not apply to the trimester system, the student’s progress is expressed in levels. ‘Level’ refers to the status of a student’s program. Each level normally equals one term’s work with a full course load; a typical four year bachelor’s degree program consists of eight levels. The first four (i.e., the first 60 units) are lower divisions. Levels 5 and above are upper divisions. The term ‘level’ is not used for graduate programs. Usually students in levels 1 and 2 take 100 series courses; those in levels 3 and 4 take 200 series courses; those beyond level 4 take 300 and 400 series courses.

<table>
<thead>
<tr>
<th>Four Year General Degree Program</th>
<th>Level</th>
<th>Units</th>
<th>Traditional Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>15</td>
<td>first year or freshman</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>15</td>
<td>second year or sophomore</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>15</td>
<td>third year or junior</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>15</td>
<td>fourth year or senior</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>

Simon Fraser University 2007 • 2008 Calendar
Courses
Subject
A subject (or ‘discipline’) is a body of knowledge with arbitrary boundary lines, e.g. philosophy, chemistry or psychology. For convenience, professors of a subject are usually grouped together in a department.

Prerequisite
A prerequisite is a requirement needed to enroll in a course.

Corequisite
A corequisite is a course to be taken at the same time as another course.

Division
Division relates to undergraduate courses: those numbered 001 to 298 inclusive are lower division courses; those numbered 300 to 499 are upper division courses. Graduate courses are numbered in the 500 to 999 series. In certain instances, upper division courses may be taken in the lower levels and lower division courses in the upper levels. Refer to specific regulations pertaining to requirements for degrees, certificates or diplomas.

Course Numbering
Each subject is divided into courses usually offered in term length units. Each course is identified by a subject name followed by a course number, the number of units, and course title, e.g. ENGL 103-3 Introduction to Drama. The first course number digit represents the division of the course; the fourth digit indicates the units. For example, ENGL 103-3 is a first division course offering three units.

Lectures, Tutorials and Laboratories
Although there are variations among departments, instruction in lower division courses combines a large lecture section with small tutorial groups. The large lecture enables as many students as possible to hear the very best teachers. The small tutorial groups provide more personal instruction and an opportunity for discussion of readings and lecture material. A typical course consists of two lectures and one tutorial a week. Notable exceptions are the sciences where a laboratory may be involved.

Credit Courses
These courses carry units and count toward the total required for a degree, certificate or diploma, subject to the regulations governing the credential.

Credit Hours
See “Units” below.

Units
Units, formerly known as credit hours, are assigned to each course; most have three units. A normal course load for a student in full attendance in a term is 15 units. Requirements for credentials (e.g., degrees, diplomas and certificates) are partially expressed as units. The unit weight is shown for each course as follows: subject: Mathematics (MATH) course number: 232 units: 3

Credit-Free Courses
These courses carry no credit and do not count toward a degree, certificate or diploma. At times, they are termed ‘non-credit courses.’

Additive Credit
In courses deemed to have additive credit, the units do not count towards the total units required for a degree.

Distance Education Courses
Many courses are available as distance education courses. The majority of these are print-based. Some may also have audio and/or video support. Increasingly, educational technologies (e.g., computer conferencing) are being incorporated as courses are developed and revised. The program parallels the campus term system of the University, with the same 16 week period for course completion.

Obligation to Declare Majors, Minors or Other Areas of Specialization
Students are expected to obtain formal approval to enter an area of specialization by the time they have earned 60 units. ‘Specialization’ is a term used to cover programs such as majors, minors, double majors, honors, minors, extended minors, etc., and ‘department’ refers to the faculty or department or school or unit responsible for a program. There are some other programs (e.g., post baccalaureate diplomas, certificates) which may have some additional instruction regarding procedure since the students in these programs fall outside the usual flow of units.

Undeclared
This category will be used for any student who, prior to the successful completion of the 61st unit, has not recorded an intended specialization. Academic advising for undeclared students is available from Academic Advising and Student Success.

Approved
This category identifies the specialization of a student who has been formally approved by the department or signing authority for that specialization and may be granted at the discretion of a department or signing authority. This must be done by the 61st unit. Academic advising for approved students is the responsibility of the department offering the approved specialization(s).

Course Loads
The following maximum course loads apply to all students, but certain students may be granted permission by their respective faculties to enroll in course overloads (see below).

Regular Session
The maximum course load for all students who are not enrolled for summer session courses only, or intersession courses only and who are not entering their graduating term is as follows:
- Applied Sciences, Arts and Social Sciences, Business Administration or Science – 18 units
- Engineering Science – 22 units (permission of the director is required for course loads below 15 hours).
- Education – 20 units

Intersession or Summer Session Only
Students enrolling for the intersession or summer session only, may not enroll in programs having a total value in excess of nine units, except where course combinations may require enrollment in a program of 10 units; however, no student will be permitted to undertake a program of more than 10 units of work.

Summer Term, Intersession, Summer Session Combinations
The normal course load limits apply to students who enroll in combinations of the above. For purposes of course load values only, in the regular summer term the course load value corresponds to the units allocated for the course. In the intersession or summer session, the course load value is twice the unit credit shown for the course. (This arises because in the shorter session classes must meet twice as often or for longer periods to equal the time of the regular term.)

Therefore in calculating course load value, note the following example.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Course Load Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 371-5 (if taken in summer term)</td>
<td>5</td>
<td>equals 5</td>
</tr>
<tr>
<td>ARCH 372-5 (if taken in eight week intersession or summer session)</td>
<td>5</td>
<td>equals 10</td>
</tr>
</tbody>
</table>

Total Course Load 10 equals 15

Course Overloads
No student who is on academic probation may enroll in a course overload.

In the Faculty of Applied Sciences, approved majors who wish to enroll in an overload require permission of the director of their school. Other Faculty of Applied Sciences students require permission of the dean of the faculty. In the School of Engineering Science, permission of the director is required for course overloads exceeding 22 units.

In the Faculties of Arts and Social Sciences, Business Administration, and Education only, a student who requires an overload to fulfill graduation requirements in the term for which he/she is enrolling may be allowed, with the dean’s permission, to enroll in an overload.

In the Faculty of Science, a student entering the graduating term who requires specific courses to fulfill graduation requirements in the term for which the student is enrolling, may be granted a limited overload in courses totalling up to 21 units, provided either the cumulative grade point average or the most recent term grade point average is 3.0 or higher.

A limited number of overloads may be approved by the dean of the faculty in which the student is enrolled on an individual basis during the course change period.

Limits on Duplication of Courses
The number of courses which a student may repeat in a degree program is limited to five. Courses taken at Simon Fraser University for which a student has already received transfer credit from another institution will count within the current limit of five repeats. This limit may be extended by the dean of the faculty. Students attempting a course for the first time shall be given the opportunity to enroll prior to any students who are presently enrolled in the course or who have passed the course with a C- or better. Students who intend to enroll in their sixth or subsequent repeat course should seek advice from their major department or Academic Advising before submitting their requests for extension of the limit to their respective dean.
Students who are pursuing a bachelor of applied science degree in engineering science should see "School of Engineering Science" on page 117. Students participating in formal exchange programs may receive exchange credit for courses completed at the host university with a passing grade.

Course Challenge
Course challenge is a method by which a student may obtain credit for course material learned elsewhere (i.e. outside Simon Fraser University). A maximum of 60 units may be obtained by the combined mechanism of course challenge and transfer credit. A student must be eligible to enroll in order to enroll for course challenge.

• course challenge is not permitted for a course for which credit has already been obtained at Simon Fraser University or through transfer credit. A student may not enroll in term for both regular enrolment and course challenge in the same course at the same time, but must select one or the other, and may not change that decision in that term later than ten days following the commencement of University classes
• a student is not entitled to enroll for course challenge if he/she has recorded two challenges as either unsuccessful or unattempted
• a student is not permitted to challenge a course(s) he/she has previously failed at Simon Fraser University
• course challenge is not included in the grade point average
• units through course challenge do not count towards term units or credit hours for government student assistance programs (e.g., Canada Student Loan, BC Student Loan, etc.) or Simon Fraser University administered financial assistance programs including scholarships, bursaries, awards and loans
• a department may elect to offer or not to offer the opportunity for course challenge

Please note the following with regard to course challenges in the Department of French and in the Centre for Latin American Development Studies.

With approval, a student may enroll and pay fees for challenge in a specified sequence of courses in a given language. If the student satisfactorily completes a course in the given language at an advanced level of the sequence, the department may indicate ‘successful’ in the preceding course(s) of the sequence in which the student is enrolled for challenge. If the student does not satisfactorily complete the course at the advanced level, then formal challenge assessment of the preceding level(s) should be undertaken to avoid two challenges without success based solely on the advanced assessment.

Enrollment for Course Challenge
Any eligible student who wishes to enroll for course challenge must obtain an official course challenge registration form from Student Services or the academic department, seek approval of the appropriate department chair to enroll for course challenge in that department, and return the completed form to Student Services or the academic department by the tenth day following commencement of classes. Normally, a student may not complete registration for course challenge after the end of the tenth day of classes. During the first ten days of classes, a student may change registration in course challenge from one course to another or to regular enrolment in courses, but may not withdraw from course challenge without substitution of regular course enrolment. After the tenth day of classes, no further course challenge changes will be permitted.

Program Changes
Any program changes require departmental approval on the program approval form available from the major department or on the Student Services website at http://students.sfu.ca/forms.

Course Changes
You are urged to read the tuition refund policy and penalties for dropping courses very carefully to avoid, or minimize, financial penalty for dropping courses in which you enroll. Details of the policy, and deadlines, appear in the Undergraduate Fees section of the Calendar and, also in the Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu). Failure to attend classes does not constitute withdrawal from a course. Courses that are not formally dropped will be given a failing grade; payment for the course’s tuition fee is required.

Term Course Changes
The Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu) that is published in pdf format each term contains detailed instruction on the procedures, and term specific deadline dates to be followed, to change courses during the enrollment process and after the start of classes. The deadline dates may vary for the intersession and summer session.

Summer Session and Intersession Course Changes
For course change information in the intersession and summer session, refer to the summer term Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu). Normal Course Change Period

Regular Term – Class Days 1-5

Courses may be added or dropped or tutorial times changed using the enrollment system without prior approval of the department offering the course. Courses that are dropped will not receive a notation on the student’s academic record.

Changes to courses registered for course challenge or for course audit must be approved by the department offering the course. During this time period a student may change registration in course
Classes and Examinations

Extended Course Change Period

Regular Term – Class Days 6-15

After the fifth day of classes to the 15th day of classes, courses may be added only with special permission of the chair and instructor concerned. No courses can be added or changed to audit status after this time. Courses may be dropped without notation on the student's academic record. However, if a student drops all courses for the term, the withdrawal will be noted on the academic record. A student may not withdraw from course challenge without substitution of a regular course enrolment. During the first ten days of classes, he/she may change registration in course challenge from one course to another, or to regular enrolment in the course. Permission of the department is required.

Course Drop Period

Regular Term – Class Days 16-25

No courses can be added or changed to audit status after the fifteenth day of classes.

After the 15th to the 25th day of classes, courses may be dropped via the web at go.sfu.ca. Courses dropped within this period will be automatically recorded with a WD notation on the student’s academic record. Students can apply to drop courses for extenuating circumstances at this time and if approved, the notation will be WE rather than WD.

During the sixth to twelfth week of classes a course or courses may be dropped only in extenuating circumstances. If approved, there will be a notation WE on the student’s academic record for specific courses dropped. Applications must be made to Student Services, Assistant Director, Student Academic Affairs. Requests arising after the twelfth week, or requests relating to courses taken in a previous term, are referred to as ‘retroactive’ and follow the same procedures as above but may take longer to adjudicate.

Note: Extenuating circumstances are defined as unusual circumstances beyond the student's control which make it impossible for the student to complete the course. If a course drop is being considered after the 12th week of classes, it is recommended that students seek advice from Academic Advising or their department advisor.

Withdrawals from the University

Students wishing to withdraw from all courses in a term must follow the same schedule as outlined above in Term Course Changes. Specific term dates can be found in (http://students.sfu.ca/gosfu/). Official records will be updated to record the date on which withdrawal from the term was effected. The date of withdrawal for students who withdraw after the fifth day of classes will be recorded on the student's academic record.

Examinations

Final examinations will normally be held during the last two weeks of each term. Examination period dates are outlined in the Academic Calendar of Events, and in the Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu) mailed each term to students eligible to enrol. Students must check the exam schedule when planning course selections. Students are reminded that final examinations may be scheduled at any time during the examination period and that students should avoid making travel or employment arrangements for this period. The student is not allowed to enroll in courses with conflicting examination times.

Each student is expected to participate in work assigned during the term. The marks obtained for work during the term may be used in determining the final standing for the course. A passing grade in any examination does not ensure a passing grade for the course.

Students who miss exams because of illness or for compassionate reasons must obtain a physician's certificate or other supporting documents to obtain consideration in the course. Such documents must be filed with the department chair or registrar within four days of the date on which the examination was to have been written. The appropriate form is available at http://students.sfu.ca/forms.

A student may not rewrite (or write, in the case of receiving an N grade) a paper unless he/she re-enrolls for the course and participates in the course as required by the instructor.

In-class final examinations are not to be held before the beginning of the official examination period. Take-home examinations cannot be due until the commencement of the official examination period.

Grades

Scale
The student is awarded a final grade at the end of the term for each credit course. Each grade will appear on the student’s record as a letter grade and numerical equivalent as follows.

Letter grade | Definition | Numerical equivalent
--- | --- | ---
A+ | Excellent performance | 4.33
A | Good performance | 4.00
A- | Satisfactory performance | 3.67
B+ | Good performance | 3.33
B | Satisfactory performance | 3.00
B- | Marginal performance | 2.67
C+ | Marginal performance | 2.33
C | Unsatisfactory performance | 2.00
C- | Unsatisfactory performance (fail) | 1.67
D | Unsatisfactory performance | 1.00
E | Unsatisfactory performance | 0.00

Explanation of Grades/Notations

AE Grades
Aegrotat standing (AE) in an incomplete course may be awarded on medical or compassionate grounds by the registrar acting on the recommendation of the instructor or department chair concerned when written evidence is submitted to substantiate a request for such standing, and when the course requirements for credit have been substantially fulfilled. This evidence normally must be received by the registrar or department within 96 hours of a scheduled final examination or within 96 hours of the last day of term lectures for which such standing is requested. Courses for which aegrotat standing is awarded are not included in the GPA calculation.

AU Notation
A student who has not been registered for a course challenge is subject to an assessment equivalent to the final examination for the course plus an interview which may include an oral and/or practical examination, all to be arranged and approved by the chair of the department concerned. Departments are free to hold course challenge examinations at any time during the term after the formal period of registration for course challenge. A performance equivalent to a grade of C or higher in the course is required for a successful course challenge. The department concerned must submit a report to the registrar on or before the last day for submission of regular grades in the course for that term indicating the final disposition for the course challenge in the term. There is no provision for extension or referral. Results will be recorded by departments as successful, unsuccessful or unattempted. Successful results will appear on transcripts of academic record and statements of standing with the entry CC in the grade column and with credit shown. At the end of term, unsuccessful or unattempted results will not appear on transcripts of academic record or statements of standing but will be held by the Office of the Registrar in internal records.

The grade of CC has no numerical equivalent and is not included in the calculation of grade point average. The grade of CC may not be applied in any way toward application for scholarships, bursaries or loans.

CF Grades
The grade of CF is given when a student performs unsatisfactorily and fails a course challenge. The grade has no numerical equivalent and is not included in the calculation of grade point average.

Note: Credit is granted for A+, A, A-, B+, B, B-, C+, C-, P, D, CC, AE, CR. No credit is granted for F, N, DE, W, AU, WD, WE, FX, IP.

Scale Changes
In the first two terms (65-3, 66-1), A- and C+ grades were awarded; these grades were discontinued with the third (66-2) term, as was the T (standing granted) grade. A- and C+ were re-established with the 67-3 term, term, discontinued in 79-2 term and re-established in 79-3.

Prior to fall term 1979, numerical equivalents assigned to grades differed from those given above as follows: A+ and A = 4.00; B+ and B = 3.00; C+ and C = 2.00.

Simon Fraser University 2007 - 2008 Calendar
Credit for the Term

All credit earned for the term will be granted, regardless of the grade point average (GPA) for the term. Credit may be granted for a specific course/topic once only. Where a student repeats a course, the course(s) with the lower grade will be recorded on official records as an excluded course. If the same grade or grade equivalent value is earned for a repeated course, the course completed most recently is included in the term GPA and cumulative GPA. The former course is excluded in the term GPA and cumulative GPA. Repeated courses for which no grades have yet been assigned (i.e. courses in progress) will be recorded as excluded until a final grade is awarded which is higher than the grade previously earned. Excluded courses remain on the official record, and are excluded in the calculation of the term GPA. See “Repeated Transfer Credit” on page 32.

Statement of Grades

At the end of each term, grades for that term are made available to enrolled students in good financial standing on the enrollment system. Notifications of grades and academic standing will be mailed to students not in good academic standing. Errors in grades will be corrected as soon as possible. Information concerning final grades is not released to unauthorized persons without written consent of the student.

Grade Point Averages

The term grade point average (GPA) is a method of expressing the student’s performance for the term as a numerical average. Each letter grade (except grades/noteations P, W, CC, CN, CF, AU, AE, CR, FX, DE, WD, WE and IP) is assigned a numerical equivalent, which is then multiplied by the unit value assigned to the course to produce the grade point.

Grades without a numerical equivalent are not included in the calculation of the grade point average. Term grade point average is computed by dividing the total number of grade points earned by the total number of units taken in the term to the third decimal place (excluding those units assigned to course with a final grade/noteation of P, W, CC, CN, CF, AU, AE, CR, FX, DE, WD, WE or IP). The CGPA calculation for each term up to the term in which the higher grade was achieved.

If the same grade is earned for the repeated course, the course completed most recently is included in the CGPA calculated for each term up to the term in which the higher grade was achieved. The upper division grade point average is calculated by dividing the total number of grade points earned in upper division courses by the total number of units assigned for those courses, counting only the higher grade in courses that have been repeated.

Standing Required for Continuance

Every student is expected to maintain an acceptable standard of scholarship. Specifically, a student must maintain a minimum CGPA of 2.00. A student who does not do so shall be considered to be performing unsatisfactorily in his/her studies.

• upon first admission to Simon Fraser University, a student shall be placed in good academic standing
• academic performance shall be evaluated on Simon Fraser University courses that have assigned grades (‘assigned grade’ includes grades A+ through to D, F, and N, but exclude P, W, CR, AE, CC, CN, CF, DE, GN, FX, IP and AU)

Academic Alert

A student whose term grade point average (SGPA) falls below 2.00, but who is not placed on any of the academic standings given below, should seek guidance at Academic Advising and Student Success.

Academic Probation

A student who has a CGPA of less than 2.00 shall be placed on academic probation (OAP). A student on academic probation may not enroll in a course overload. A student on OAP standing may not receive a ‘letter of permission’ to attend another university or college.

Required to Withdraw

A student may be required to withdraw (RTW) after one or more terms on academic probation (see ‘outcomes for a student on academic probation’ below). A student on RTW standing may not receive a ‘letter of permission’ to attend another university of college.

Extended Withdrawal

A student may be placed on extended withdrawal (EW) after he/she is required to withdraw (RTW), is reenrolled and subsequently is on academic probation for one or more terms (see Outcomes for a Student on Academic Probation below). A student on EW (extended withdrawal) standing may not receive a ‘letter of permission’ to attend another university or college.

Outcomes for a Student on Academic Probation

A student on academic probation shall be evaluated at the end of each term. If at the end of the term

• the SGPA and the CGPA are each 2.00 or higher, the student shall be in good academic standing
• the SGPA is 2.00 or higher, but the CGPA is less than 2.00, the student shall continue on academic probation
• the SGPA and the CGPA are each less than 2.00, the student shall continue on academic probation
• the SGPA and the CGPA are each 1.00 or less, the student shall be not in good academic standing

The CGPA calculation for each term up to the term in which the higher grade was achieved.
the SGPA is less than 2.000, but the CGPA is 2.000 or higher, the student shall continue on academic probation. (This could occur if a student repeats a course.)
• both the SGPA and the CGPA are less than 2.000, the student shall be required to withdraw (RTW) from the university or, if previously required to withdraw (RTW), shall be placed on extended withdrawal (PW)

**Grade Point Averages Needed for Graduation**

Grade point averages (GPAs) used for graduation are the minimum GPAs that must be achieved to satisfy the requirements for a degree or other credential. The graduation GPA must be obtained both on the overall course work (CGPA) as well as on the upper division subset of that work (UDGPA).

In addition, program GPAs are the minimum GPAs that must be obtained to satisfy the requirements of an honors, major, extended minor or minor program. In each case, the program GPA must be obtained both on the overall course work (CGPA) as well as on the upper division subset of that work (UDGPA) in the program area.

The graduation and program GPAs specified below are University minimum requirements; individual faculties and departments may, with senate approval, have higher requirements.

In the event of repeated courses, only the higher grade is used in these GPA calculations.

**Convocation**

Convocation is held in June and October annually. Students who fulfill their degree requirements during the fall or spring terms may attend the June ceremony. Graduates of the summer term convocate in October. For specific dates, see “Academic Calendar of Events” on page 10, or online at students.sfu.ca/cs/CalEvents.html

**Application for Graduation/Granting of Degree, Certificate or Diploma**

Each candidate for a degree, certificate, or diploma must formally apply for graduation. Details on how to initiate the graduation process are contained in the Course Timetable and Exam Schedule published each term, and are also available online at students.sfu.ca/convocation. for deadlines to apply for or to cancel applications to graduate.

**Notification of Award by Senate**

Following senate approval, each student who has been awarded a degree, certificate or diploma will receive a letter of confirmation from the registrar.

**Program GPAs**

<table>
<thead>
<tr>
<th></th>
<th>All courses (CGPA) and all upper division courses (UDGPA) taken at Simon Fraser University</th>
</tr>
</thead>
<tbody>
<tr>
<td>joint honors degree*</td>
<td>3.000</td>
</tr>
<tr>
<td>honors degree*</td>
<td>3.000</td>
</tr>
<tr>
<td>general degrees</td>
<td>2.000</td>
</tr>
<tr>
<td>certificates</td>
<td>2.000</td>
</tr>
<tr>
<td>post baccalaureate diplomas</td>
<td>2.500</td>
</tr>
</tbody>
</table>

*students who have obtained a GPA of 3.5 or greater in both the graduation and program categories specified above will receive the designation of Joint Honors or Honors (First Class).

**Convocation Procedure**

Information on Convocation can be found at students.sfu.ca/convocation.
Student Responsibility
A student will be expected to fulfill the requirements and write the examinations in all courses for which he/she is registered after the date shown in the Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/enrollment) as the last date to drop courses. It is the student’s responsibility to ensure that Student Services has the proper information regarding courses in which the student is enrolled. Except in cases of illness, or for compassionate reasons, failure to write the examination constitutes a failure in the course.
A student may receive credit for only the courses in which he/she is officially enrolled according to student service’s records.

Academic Honesty and Student Conduct

Academic Honesty
All members of the University community share responsibility for academic standards and the reputation of the University. Academic honesty is a cornerstone of the development and acquisition of knowledge. Academic honesty is a condition of continued membership in the University community. Academic dishonesty, like other forms of dishonesty, is misrepresentation with intent to deceive or without regard to the source or the accuracy of statements or findings. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; it is, furthermore, unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University.

The following examples are representative but not exhaustive of activities constituting academic dishonesty: plagiarism (presenting the work of another person as your own); submitting the same work more than once without prior approval; cheating; impersonation; submitting false records or information; stealing or destroying the work of another student; removing, mutilating, misplacing or destroying books or other library material; unauthorized or inappropriate use of computers, calculators and other forms of technology in course work, assignments or examinations.

Undergraduate Schedule of Classes and Examinations

Penalties for Acts of Academic Dishonesty
Penalties/remedies imposed by the University for misconduct may include but are not limited to one or more of the following: a warning, a verbal or written reprimand, exclusion from specified areas of the University, restitution or other ameliorative measures, counselling, denial of admission or readmission to the University, deregistration, forfeiture of University awards or financial assistance, suspension or permanent suspension from the University.

Procedures for Academic Dishonesty and Student Misconduct
Procedures to be followed by the University in imposing a penalty for acts of academic dishonesty or acts of misconduct or an appeal therefrom are detailed in the policy establishing the university board on student discipline and the senate committee on disciplinary appeals (policy T10.03). This policy is available in the Library or any department office, or on the website www.sfu.ca/policies/teaching/.

Student Appeals
See “11.16 Graduate Student Appeals” on page 249 for graduate student appeals.
Students may appeal certain University decisions as follows.

Reconsideration of Grades
Students who intend to appeal a course grade are cautioned that failing grades have been checked very carefully and appeals seldom result in higher grades except where a clerical error has occurred. See academic policy T20.01 at www.sfu.ca/policies/teaching/

Admission, Readmission and Transfer Credit
Appeals for admission and readmission may be considered by the committee to review university admissions.

Withdrawal
During the sixth to twelfth week of classes a course or courses may be dropped only in extenuating circumstances. If approved, there will be a notation WE on the student’s academic record for specific courses dropped. Applications must be made to Academic Appeals Officer, Enrollment Services. Requests arising after the twelfth week, or requests relating to courses taken in a previous term, are referred to as ‘retroactive’ and follow the same procedures as above but may take longer to adjudicate.

Note: Extenuating circumstances are defined as unusual circumstances beyond the student’s control which make it impossible for the student to complete the course. If a course drop is being considered after the 12th week of classes, it is recommended that students seek advice from Academic Advising or their department advisor.

Withdrawals from the University
Students wishing to withdraw from all courses in a term must follow the same schedule as outlined above.
Appeal forms can be found at http://students.sfu.ca/forms/ and specific term dates can be found in the http://students.sfu.ca/enrollment/.

Tuition Fee Appeals for Refund
The Enrolment Appeals Committee hears appeals for refunds of tuition fees and penalties for classes dropped due to extenuating circumstances beyond your control. The appeal must be supported with proper documentation, i.e. medical and/or (in cases that involve a death in the family) a certificate of death. Financial hardship alone does not qualify.
You must appeal within one calendar year from the time you dropped the class(es). If you are uncertain about your health, finances, time or other resources, you are advised to be conservative in committing yourself to classes. Although the University allows students to drop classes under extenuating circumstances, extenuating circumstances alone are not sufficient for granting an appeal for a refund of tuition fees. Student Services provides appeal forms and advice on submitting an appeal. You can also download a pdf of the enrolment appeal form at students.sfu.ca/pdfforms/.

Academic Penalties (e.g., Suspension)
Disputes about the findings of fact may be brought to the university board on student discipline (policy T10.03). Appeals on the following three grounds may be brought to the senate committee on disciplinary appeals (also Policy T10.03).
• that there was unfairness in the process at the hearing
• that the penalty imposed was inappropriate
• that new evidence has emerged that was not available at the hearing and which casts doubt on the accuracy of the finding

Entry to Limited Enrolment Program or Faculty
Appeals may be considered by the appropriate chair, director or dean.

Senate Appeals Board
The senate appeals board considers cases, in which a student or former student feels aggrieved by the decision of a faculty, department or other administrative unit relating to an enrollment in courses, withdrawal from the University, eligibility for graduation, approval to a program or matter relating to academic standing, when special circumstances are present. Appeals must be submitted in writing, giving the grounds for the appeal.
Grounds for Appeal
Special circumstances are limited to documented significant physical or psychological distress, or serious mis-advice or improper administration by authorized University personnel with evidence the appellant’s studies were adversely affected. The board will assess cases based on the evidence submitted, both written and oral, the academic record of the appellant and probable actions of a hypothetical ‘reasonable person’ who might encounter circumstances similar to those encountered by the appellant. Appeals based on dissatisfaction with University policy or mere failure to meet published deadlines will not constitute special circumstances. Visit http://students.sfu.ca/forms to obtain the appeal form.

Class Interruption
Simon Fraser University makes reasonable efforts to ensure that its classes and courses of instruction proceed on a regular basis and without interruption. Faculty have certain discretion to cancel or change the timetable for their classes; they will endeavor to give reasonable notice of any cancellation or change. Simon Fraser University will not be responsible for cancellation or change of any class. Neither will Simon Fraser University be responsible for the interruption or termination of any class or course of instruction which results from fire, riot, labor disruption or any other event which occurs despite the University's efforts, or for failure to give notice of the interruption or termination.

Medical Requirements
Simon Fraser University does not require a pre-admission medical examination, but does reserve the right to require a student to submit a medical certificate at any time. It is the student's responsibility to have adequate hospital and medical insurance coverage. Adequate medical and hospital insurance is that which is provided under the Medical Services Plan of BC, or any other plan, government or private, which provides coverage equivalent to that offered under the Medical Services Plan of BC. Students who seek medical treatment through either the University Health Services or off-campus medical facilities must provide evidence of medical insurance. Failure to provide adequate information will result in the student being charged directly for services rendered. It is important for students to remember that while we in BC take health care for granted under the Medical Services Plan of BC, those who do not have medical coverage will bear the costs, which can be expensive. The University assumes no liability for any failure by the student to maintain adequate medical or hospital (or dental) insurance, nor is the University responsible for any costs not covered by the student’s personal insurance plan(s), whether it is Medical Services Plan coverage or otherwise. It should be understood that the University itself carries no medical, hospital or dental insurance coverage on students’ behalf. Questions regarding hospital or medical insurance should be directed to the Medical Services Plan of BC, telephone 604.683.7151 (toll free). Students who are not citizens or permanent residents of Canada should contact a private insurance company for coverage during the waiting period to obtain the Medical Services Plan coverage. For information on available private medical plans, contact SFU International, telephone 778.782.4232.
Undergraduate Fees

Tuition Fee Schedule

Simon Fraser University assesses undergraduate tuition fees in accordance with a schedule of fees based primarily on the number of units in which the student enrolls. Various special fees may be assessed by the University in certain circumstances or for specific purposes. All fees are subject to change, subject to provincial legislation and board of governors approval.

<table>
<thead>
<tr>
<th>Basic Tuition Fee</th>
<th>Differential Tuition Fee for International Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>$151.10</td>
<td>$484.40</td>
</tr>
<tr>
<td>$201.50</td>
<td>$534.80</td>
</tr>
<tr>
<td>$158.70</td>
<td>$492.00</td>
</tr>
<tr>
<td>$166.20</td>
<td>$499.50</td>
</tr>
<tr>
<td>$151.10</td>
<td>$484.40</td>
</tr>
<tr>
<td>$75.55</td>
<td>$242.20</td>
</tr>
<tr>
<td>$639.50</td>
<td>$639.50</td>
</tr>
</tbody>
</table>

Subject to the notes below, and to the graduate fee schedule:

1. The basic tuition fee schedule applies to an undergraduate student who registers for an undergraduate or graduate course, or courses, who establishes or has established to the satisfaction of the University that, at the time of commencement of the term, he or she is either a citizen of Canada or has the status of a permanent resident of Canada.

2. The differential tuition fee for international students schedule applies to each undergraduate student who registers to undertake an undergraduate or graduate course, or courses, who does not establish or has not established to the satisfaction of the University that, at the time of commencement of the term, he or she is either a citizen of Canada or has the status of a permanent resident of Canada.

3. The University reserves the right at any reasonable time to require any individual student to establish proof of status claimed.

4. For the purposes of assessing fees, an undergraduate student is any student registered as a student at the University except (a) a student who has been admitted by the senate graduate studies committee to undertake work towards a master’s degree, PhD degree or other graduate program at Simon Fraser University and who registers for such work, or (b) a student who has been admitted by the senate graduate studies committee to undertake work as a qualifying, special or exchange student at Simon Fraser University and who registers for such work. Those in (a) and (b) are assessed fees under the undergraduate tuition fee schedule but if they have approval to undertake some undergraduate course work supplementary to the program, they will be assessed tuition fees according to the basic tuition fee schedule for such work.

5. Persons aged sixty years or more at the commencement of the term, and who are Canadian citizens or who hold Permanent Resident status in Canada, are exempt from undergraduate tuition fees except in the case of field schools and formal exchange programs. All participants in field schools will be assessed all fees established for that field school.

6. Fees are not transferable from one term to another.

7. For students registered in any combination of 8 week or 16 week courses, tuition fees will be assessed per unit as shown in the tuition fee schedule.

Student Services and Recreation-Athletics Fees

The Student Services Fee (SSF) and Recreation-Athletics Fee (RAF) are assessed to all students registered for credit courses that are offered at the Burnaby, Simon Fraser University Vancouver and Simon Fraser University Surrey campuses according to the table below. These fees are not assessed to students aged 60 years or more who are Canadian citizens, or who have permanent Resident status in Canada. Those registered in audit courses, designated ‘off-campus’ courses, or distance education courses do not pay these fees.

<table>
<thead>
<tr>
<th>SSF</th>
<th>RAF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>three or fewer units</td>
<td>$37.12</td>
<td>$30.93</td>
</tr>
<tr>
<td>Intersession only</td>
<td>$37.12</td>
<td>$30.93</td>
</tr>
<tr>
<td>summer session only</td>
<td>$37.12</td>
<td>$30.93</td>
</tr>
<tr>
<td>four or more units</td>
<td>$37.12</td>
<td>$61.86</td>
</tr>
<tr>
<td>any combination of intersession, summer session, summer term</td>
<td>$37.12</td>
<td>$61.86</td>
</tr>
<tr>
<td>any combination of Co-operative Education work term and credit course</td>
<td>$37.12</td>
<td>$30.93</td>
</tr>
</tbody>
</table>

Student Activity Fee

A student activity fee, determined by the Simon Fraser Student Society, is collected from all students enrolled in credit courses with the exception of persons sixty or more, who are exempt, as well as students taking courses for audit purposes only. For a breakdown of this fee see "Simon Fraser Student Society" on page 471.

Special Fees

<table>
<thead>
<tr>
<th>Application Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
</tr>
<tr>
<td>$45.00</td>
</tr>
<tr>
<td>Each time an applicant applies for admission or readmission, a $45 application fee is required. This fee, non-refundable and not applicable to tuition fees, must accompany the application for admission or be paid soon after making an application.</td>
</tr>
</tbody>
</table>

| Level 2         |
| $100.00         |
| A $100 application fee is required for all applicants whose academic records, in whole or in part, originate outside of BC. (A level 1 fee is assessed if the documents originate from a Canadian high school, or if the applicant is participating in a recognized exchange program between Simon Fraser University and another institution.) |

| Library/Identification Card Replacement | $16.50 |
| U-Pass Card Replacement                  | $20.00 |
| Replacement for an Original Degree, Diploma or Certificate Parchment | $21.50 |
| Residence Application                   | $25.00 |
| Graduation                               | $35.00 |
| - granting of a degree                   | $35.00 |
| - award of certificate or diploma        | $20.00 |
| - late application to graduate (non-refundable) | $20.00 |
| International Program                   | $150.00 |
| - formal exchange programs participation | $150.00 |
| - international field school administration | $150.00 |
| - computing science dual degree          | $700.00 |

Universal Transit Pass

The U-Pass fee is $98 per term. The following are not eligible for U-Pass and will be exempt from this fee:

- students who are not assessed Simon Fraser Student Society fees (see “Student Activity Fee” on page 38)
- students who are enrolled in Distance Education courses only
- students who are enrolled in designated ‘off-campus’ courses only
- students who do not live in the GVRD and are enrolled in designated ‘on-campus’ courses which are scheduled to meet a total of one day or less per week on average throughout the term

The following will be exempted from the U-Pass fee by following the procedures for U-Pass exemption at the U-Pass website (www.sfu.ca/upass). Please note that supporting documentation will be required.

- students who do not reside in the Greater Vancouver Regional District (GVRD) and who attend classes at a Simon Fraser University campus on average one day per week or less during the term
- students who are registered with TransLink as handyDART users or hold a valid non-transferable TransLink transit pass
- students who hold a valid TransLink U-Pass issued from another post-secondary educational institution
- students who have a documented physical or psychological condition which prevents public transit use

The U-Pass fee is charged to all students at the time of enrollment in courses. For exempt students, the U-Pass fee reversal will be applied to accounts by the first week of classes.
Mandatory Supplementary Course Fees

In addition to credit course fees, mandatory supplementary course fees may be assessed for individual courses in addition to basic tuition and are deemed necessary for successful completion of the course. Mandatory supplementary course fees cover additional costs associated with, for example, such items as field trip expenses or special costs/handling involved in distance education courses.

A schedule of these fees appears below, and is also published in the Undergraduate Schedule of Classes and Examinations as well as in departmental course outlines. The fees are approved by the vice-president finance and administration, following the recommendation of the advisory committee on mandatory supplementary course fees. Questions regarding these fees may be directed to the department initiating the fee, Student Services, or the vice-president finance and administration.

Mandatory supplementary course fees are not charged for regular credit instruction services which may include:

- evaluation of work or performance, such as marking of papers and exams
- laboratory use, including materials and supplies that are consumed during laboratory use. (Departments may charge a refundable deposit for materials used by the student and returned to the University in reasonable condition at the end of the course.)
- basic library facilities including one library card and access to collections
- basic microcomputer laboratory use
- materials or services required as a result of the method of instruction such as audio visual equipment, course outlines, study rooms and films and video tapes that are integral to the instruction and do not become property of the student.

Photocopied materials, prepared computer disks and audio visual tapes may replace or enhance the use of a required text as a means of instruction and are therefore not considered to be mandatory supplementary course fees. Many prepared packages will be distributed through the SFU Bookstore. It may be necessary at times to distribute some materials within departments. Disclosure of these fees will be made in each course outline.

Archaeology

ARCH 435 ................................................ $500

Biological Sciences

BISC 306 ................................................ up to $150
BISC 310 ................................................ up to $120
BISC 316 ................................................ up to $12
BISC 326 ................................................ up to $150
BISC 404 ................................................ $60
BISC 406 ................................................ up to $45
BISC 416 ................................................ up to $150

Contemporary Arts

FPA 130, 131 .............................................. $75
FPA 160, 161, 163 ........................................ $50
FPA 170 .................................................. $35
FPA 230, 231 .............................................. $100
FPA 233 ................................................ $50
FPA 252 ................................................ $20
FPA 260, 261, 262, 263, 264, 265, 268, 269, 270 ....... $50
FPA 292 ................................................ $75
FPA 333, 360, 361, 362, 363, 364, 365, 368, 369, 370 .... $50
FPA 374 ................................................ $25
FPA 375 ................................................ $35
FPA 390 ................................................ $75
FPA 393, 460, 461 ........................................ $50

Distance Education

All courses offered through the Centre for Distance Education are assessed a 40% per term fee to cover the cost of printing and binding materials, packaging and mailing of course materials and assignments, and broadcast and distribution rights for video support.

Earth Sciences

EASC 204 ................................................ $30
EASC 206 ................................................ up to $200
EASC 301, 303 .......................................... up to $100
EASC 304 ................................................ up to $30
EASC 305 ................................................ $80
EASC 309, 313 .......................................... up to $30
EASC 402 ................................................ up to $150
EASC 403 ................................................ $50
EASC 404 ................................................ up to $100
EASC 406 ................................................ up to $3,000
EASC 408 ................................................ up to $250
EASC 410 ................................................ $30
EASC 411 ................................................ $100
EASC 413 ................................................ up to $30
EASC 416 ................................................ up to $50
EASC 418, 419 .......................................... up to $30
EASC 421 ................................................ $20

Education

EDUC 330 ................................................ $20
EDUC 401/402, 405 ...................................... $25
EDUC 410 ................................................ $20
EDUC 452 ................................................ $46
EDUC 476, 477 .......................................... $20

Environmental Science

EVSC 491 ................................................ $200

Geography

GEOG 213 ................................................ $60
GEOG 253 ................................................ $15
GEOG 264 ................................................ up to $10
GEOG 310 ................................................ up to $400
GEOG 313 ................................................ $50
GEOG 323 ................................................ $15
GEOG 324 ................................................ $20
GEOG 353 ................................................ $35
GEOG 385 ................................................ $15
GEOG 412 ................................................ $15
GEOG 416 ................................................ $35
GEOG 417 ................................................ $15
GEOG 453 ................................................ $50
GEOG 456 ................................................ $60
GEOG 427, 428 .......................................... up to $50
GEOG 451 ................................................ up to $10
GEOG 453 ................................................ $50
GEOG 497 ............................................... $2,500 – $3,000

History

HIST 376 ................................................ $12

Interactive Arts and Technology

IAT 208 ................................................ $60

Marine Science

All MASC courses offered at the Western Canadian Universities Marine Biological Station (Bamfield) carry a supplementary course fee of up to $200 per unit.

Sociology and Anthropology

SA 364 ................................................ $40
SA 371 ................................................ $100

Viewing Your Student Account

When a change is made to any part of your enrolment, your student account balance will be affected. This new balance will be calculated overnight by our computer system and will be available the next day. Please make sure that you check for your new account balance before paying your fees. Obtain account balance information by visiting http://go.sfu.ca.

Payment of Fees

Regardless of the payment method, always provide your Simon Fraser University student number with all financial transactions. The Simon Fraser University student number is the only account reference that the University uses so it is very important to include this information.

There are several methods to pay your fees.

Internet/Telephone Banking

- set up Simon Fraser University as a Bill Payee on your account
- use your Simon Fraser University Student Number as the account/invoice/billing number (note: some banking institutions look for a 10 digit number for the student/billing number. In this case, add a zero to the beginning of your student number.)
- go to “make a payment”
- enter amount of payment
- record “confirmation number” for your records
- allow two to three business days for the payment to be posted on to your Simon Fraser University Student Account

In-person on campus

Students can drop off a cheque or money order in the mailbox at Simon Fraser University’s main campus in MBC 3000. Make the cheque payable to Simon Fraser University, with your Simon Fraser University student number clearly printed on the front.

Students can also pay by cheque, money order or debit card at the general enquiries counter on any of the three campuses. (Credit cards are not accepted for tuition fee payments.)

- Simon Fraser University’s main campus at the Student Services general enquiries counter, located in MBC 3000. Monday – Thursday 9 am – 6:00 pm, and Friday 10 am – 4:30 pm
- Simon Fraser University Surrey Room 250, 13450 102 Avenue, Surrey, Monday – Friday 9 am – 4:30 pm, phone 778.782.7400.
- Simon Fraser University Vancouver. 515 West Hastings Street, Vancouver. 778.782.5000 Tel. Monday – Thursday, 10 am – 7 pm and Friday 10 am – 5 pm.

By mail

Mail a cheque or money order (DO NOT send cash) to Student Accounts, Student Services, MBC 3000, Simon Fraser University, B888 University Drive, Burnaby, BC V5A 1S6.

Please allow five working days for a payment to be posted. There is a $25 administrative handling fee for all returned cheques.

Payment of the Admission Deposit for New Students

New students must pay a non-refundable admission deposit of $100 to confirm acceptance of the offer of admission to undergraduate studies given by the University. Students aged sixty years or more are not required to pay this deposit.

The deposit will be applied to the cost of tuition. The deposit is not an additional charge to the tuition fee assessment.

New students may pay the $100 admission deposit by credit card through goSFU (http://go.sfu.ca) under
"Finances." This is the only regular fee payable by credit card.

New students registering for their first term are not required to pay the enrollment deposit described below.

Payment of the Enrollment Deposit for Continuing Students

Continuing students registering for their second or subsequent term are required to pay an enrollment deposit of $100. Payment must be received and posted to the student account before a student will be given access to the enrollment system to select courses. Students must pay the enrollment deposit at least five working days prior to attempting to enroll in classes.

The deposit will be applied to the cost of tuition. The deposit is not an additional fee.

Payment of the deposit is considered by the University to be a commitment by a student to attend the term.

Payment of the deposit cannot be deferred. Students eligible for any awards or sponsorships will receive a refund from Student Services when the appropriate units are received and processed.

Students who are eligible for tuition fee waivers or holders of Faculty of Education tuition fee certificates (school associate certificates) must submit to Student Services the properly completed forms and payment for the total amount of the student activity fee, athletic fee, UPass (if applicable), and student services fee each term no later than the tuition and fee payment deadline.

Payment of Balance of Assessed Fees

The deadline for payment of the balance of fees is published in the Undergraduate Schedule of Classes and Examinations distributed each term. Credit for scholarships and bursaries will be given only on the authority of the Financial Assistance office.

Cancellation of Enrollment

To cancel your entire enrollment, you must use the student information system to drop each of your courses.

To avoid financial penalties, you must drop all courses by the deadlines given in the Undergraduate Schedule of Classes and Examinations publication.

Non-payment of outstanding fees does not constitute cancellation of enrollment and grades based on incomplete or no work completed will be assigned.

Refunds

When students who are registered in credit courses reduce the number of courses in which they registered, a refund may be granted provided the course change is made during the prescribed refund period. Special fees are not refundable, with the exception of the graduation fee and award of certificate or diploma fee.

Tuition Refund Policy and Course Drop Penalties

Regular term and Intersession (May-June) Space in Simon Fraser courses is limited. Tuition refunds and penalties as outlined below are designed to discourage a student from holding space in course(s) which the student eventually decides not to take.

The enrollment system monitors course drops by taking ‘snapshots’ of the number of courses (net course load) in which each student is registered. Penalties are assessed on decreases in net course load, not on units. The exact dates of ‘snapshots’ are published each term in the Undergraduate Schedule of Classes and Examinations under the heading Deadlines: However, the general dates of the three “snapshots” taken are: first, approximately one week after all students have been given access to the enrollment system; second, end of week one of classes; and third, end of week two of classes.

The first and last ‘snapshots’ are compared and, if a student’s course load has decreased, the student will be assessed a penalty for each course drop that resulted in a decreased course load. The penalty is $50 if the course was dropped before the end of week one, and $100 if the course was dropped before the end of week two. After week two there is no refund of tuition fees for courses dropped.

Summer Session (July-August)

Tuition penalties are not applied for dropping summer session courses.

Overdue Accounts and Dishonored Payments

Students with overdue accounts will be considered to be in bad financial standing and will be precluded from registering in subsequent semesters. In addition the University will withhold certain services, including but not limited to the release of various letters and documents such as official transcripts of academic record and parchments for degrees, diplomas and certificates. An account that is delinquent without approved resolution will be forwarded to a collection agency for appropriate action.

A student who presents payment in the form of a cheque that is subsequently returned by the student’s financial institution for lack of sufficient funds or because a stop payment has been placed on that cheque will be assessed a penalty fee of $25. In the event that a student on more than one occasion submits a cheque that is dishonored for any reason, the University reserves the right to require all future financial transactions with the University to be by cash, certified cheque or money order. The University may cancel a student’s enrollment in a term when payments made by the student are subsequently dishonored by the student’s financial institution. Late payment fees will apply.

Students with overdue accounts will be assessed a late fee penalty on outstanding fees. 2% (24% per annum) will be assessed after the last day of the sixth week of classes and an additional 2% will be assessed each month thereafter, regardless of any pending scholarships, bursaries, awards, tuition waivers and school associate certificates. Total penalties will be adjusted to conform to Canadian laws and regulations when the final payment is made.

Refunds due to Overpayments

To obtain a refund due to an overpayment, students must submit a refund application. Visit http://students.sfu.ca/studentaccounts to obtain the refund request form. The website shows the refund cheque request deadline.

Graduation Fee and Award of Certificate or Diploma Fee

If the candidate’s application for a degree, certificate and/or diploma is not approved, a full refund is issued. Applications may not be transferred from one term to another and the required fee must accompany each application. Late fees assessed when applying after the first deadline are not refundable.

Tuition Fee Appeals

Any student who considers he/she has just cause to appeal the application of University policy as it pertains to the assessment and refund of undergraduate tuition fees may submit an appeal in writing to the enrollment appeals committee. See “Tuition Fee Appeals for Refund” on page 36.

Tuition Fee Certificates (T2202A)

All Simon Fraser University students, current and past, can print T2202A tax forms, starting from the 2003 tax year, via the web at http://go.sfu.ca/ For more information about how to print T2202A forms, visit http://students.sfu.ca/fees/taxinfo.html.
Financial Aid and Awards

Introduction

Students are eligible for a variety of financial assistance programs including entrance or continuing scholarships, bursaries, awards, and loans. Scholarships recognize outstanding academic achievements; bursaries are awarded on the basis of financial need; awards generally acknowledge outstanding achievements or contributions to the community. Government student loans are awarded on the basis of financial need by the student's province of residence. Emergency loans are available from Simon Fraser University to students in short term financial crisis. These programs are administered by one of three agencies: Simon Fraser University (University administered), an external organization (Externally administered), or a government (Government administered).

Eligibility

Students entering Simon Fraser University from secondary or high school, or transferring from a regional college or university, may be eligible for:
- Simon Fraser University Entrance Scholarships
- Bursaries
- Awards for the University community
- Canada Student Loan/BC Student Assistance Program

Students re-entering Simon Fraser University may apply for:
- Scholarships for continuing students
- Bursaries
- Awards for the University community
- Canada Student Loans/BC Student Loan and Assistance Program

Deadlines

Unless an award specifies a particular date, the deadlines are as follows.

University administered programs

Entrance Scholarships
- February 28

Scholarships for Continuing Students
- end of week two of classes

Bursaries
- approximately eight weeks before term

Externally administered programs
- see the specific award for deadlines

Government administered programs

Government Student Loans
- at least eight weeks before term

Special Information for Intercollegiate Athletes

Since Simon Fraser University competes in both the NAIA and the CIS, eligibility requirements for scholarships, awards and bursaries may differ for individual sports.

General Information and Regulations

The following regulations apply generally to all financial assistance administered by the University.

• All scholarships, awards and bursaries are given on the recommendation of the senate undergraduate awards adjudication committee. Committee decisions, when announced, are final.
• The University does not guarantee the payment of any scholarships, awards or bursaries listed in the Calendar other than those provided directly from funds of the University. If invested funds do not provide the necessary income for an endowed scholarship, award or bursary payment of the award may be reduced or the award withheld. The University reserves the right to withhold awards donated by individuals or organizations where the funds required have not actually been received.
• The University reserves the right to refrain from making an award if, in its opinion, none of the applicants meets the terms specified.
• Students must successfully complete the term for which they have received the award. Failure to successfully complete the term will normally result in the award being revoked.
• The individual student is responsible for knowing the deadlines, proper completion of the application forms and supplying all appropriate documentation for the various scholarships, awards and bursaries. Incomplete applications may be rejected.
• The senate policy committee on scholarships, awards and bursaries ensures that all scholarships, awards and bursaries administered by the University or listed in its Calendar, are in the best interests of the University as an academic institution. The terms of reference for scholarships, awards and bursaries should not include restrictive criteria unrelated to academic merit or financial need such as race, creed, colour, sex, or national origin, when the committee determines these criteria are improper or irrelevant.

The University reserves the right to give special consideration to course load requirements on

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scholarships, awards or bursaries for persons with disabilities who are unable to meet the course load requirements due to their disability. Supporting documentation may be required.

- Students who misrepresent themselves on application forms for scholarships, awards or bursaries will be subject to disciplinary action.
- Any regulations which apply to a specific category of financial assistance are given within that particular subsection.

University Administered Programs

University Entrance Scholarships and Awards

Student Recruitment, Student Services, Maggie Benston Centre, Tel 778.782.4970 general enquiries, Fax 778.782.4722, http://students.sfu.ca

The University offers entrance scholarships and awards to outstanding students from across Canada. Our entrance scholarship program recognizes exceptional academic and community achievements of students entering directly from high school and BC colleges or equivalent.

The scholarships and awards described below reflect our current program. For complete descriptions and selection criteria applicable to students entering in the fall of 2008, please refer to the entrance scholarship brochure and application material, available in fall 2007 at http://students.sfu.ca/ps.

All scholarship applicants should have high academic standing — a minimum 90% grade average is required. Please read carefully the application requirements described on the above website, as not all scholarships require application. Applicants must be Canadian citizens or Permanent Residents to qualify for major entrance scholarships, except for international awards. All scholarships must meet certain academic and registration requirements for complete disbursement of funds. Scholarship continuation regulations can be found at http://students.sfu.ca/ps/entschols regs.html

Additional Scholarships and Awards

Students may only hold one entrance scholarship from the University. Upon redeeming all of the scholarship installment, students will be considered for scholarships available to continuing students. See “Scholarships for Continuing Students” on page 43.

Travel Allowance

An additional travel allowance is available for some scholarships or awards.

- Scholarship or award winners who live outside BC will receive a one-time travel allowance of $1000.
- Scholarship or award winners who live within BC but outside the Lower Mainland will receive a one-time travel allowance of $500.

For Canadian High School Students; Application Required

The final application deadline for September entry is February 28th.

$34,000 Simon Fraser Scholarships

Recognize excellent academic performance and potential. Distributed over eight semesters. Eligible for travel allowance.

$29,000 Simon Fraser Alumni Leadership Scholarships

Recognize extraordinary leadership, community service, citizenship, and achievement of high academic standing. Distributed over eight semesters. Eligible for travel allowance.

$24,000 Gordon M. Shrum Scholarships

Recognize high academic standing and commitment to school and community service, volunteer activity, arts, or athletics. Distributed over eight semesters. Eligible for travel allowance.

$16,000 Lloyd Carr-Harris Foundation Entrance Scholarship in Business Administration

This award is offered to an entering high school student of the highest academic standing who also obtains direct admission into the Faculty of Business Administration. The award is distributed over eight semesters. Not eligible for travel allowance.

$7,000 Dean’s Scholarships

Dean’s Scholarships are awarded within each of the faculties of Applied Sciences, Arts, Business Administration, Education, Health Sciences, and Science, to recognize academic achievement and potential in a particular area of study. Distributed over four semesters. Eligible for travel allowance.

$5,000 Lohn Foundation Entrance Award

The award is offered based on financial need to entering high school students with a minimum 80% admission average and demonstrated commitment to volunteer activities. To be considered eligible, candidates should demonstrate their involvement in unpaid volunteer activities by providing their resume and cover letter describing their volunteerism, the length of service and time-commitment dedicated to such interests and including a letter of reference from a supervisor of the candidate’s volunteer work.

Completion of the Application for Student Financial Aid form is required. See students.sfu.ca/financialaid. Not eligible for travel allowance.

$5,000 H.Y. Louie Entrance Award

The awards are offered based on financial need to students with a minimum 80% admission average and demonstrated commitment to volunteer activities. To be considered eligible, candidates should demonstrate their involvement in unpaid volunteer activities by providing their resume and cover letter describing their volunteerism, the length of service and time-commitment dedicated to such interests and including a letter of reference from a supervisor of the candidate’s work.

Completion of the Application for Student Financial Aid form is required. See students.sfu.ca/financialaid. Not eligible for travel allowance.

$2,000 Community Entrance Awards

The Community Entrance Awards will be available for students entering the University in the fall term from areas of British Columbia that are under-represented at Simon Fraser University. Valued at $2,000, the Awards will recognize students who have demonstrated a commitment to school and/or community leadership, the contemporary arts or the sciences. First Nations applicants are encouraged. A minimum average of 80% is required and up to six awards will be made. These Awards are not tenable with other major entrance scholarships. Not eligible for travel allowance.

$2,000 SFU Surrey Entrance Awards

The SFU Surrey Entrance Awards recognize exceptional academic and community achievement of BC secondary school students from all areas of British Columbia; particularly those residing in locations south of the Fraser River. Sixty awards are available to applicants of one of the following three, first-year cohort programs at SFU Surrey: TechOne (Applied Sciences), Explorations (Arts and Social Sciences), or Science Year One (Science). Students who apply for direct admission to Business Administration, Computing Science, or Interactive Arts and Technology at the Surrey campus are also eligible to apply for the awards. Applicants for the award need a minimum admission average of 80%. Not eligible for travel allowance.

Dr. Gordon L. Diewert Memorial Entrance Scholarship

A scholarship will be awarded in the fall term to a graduating student from New Westminster Senior Secondary School, who is planning to pursue a major in kinesiology at Simon Fraser University. Applicants must have a record of community service, involvement in athletics and a high academic standing. The successful applicant will be recommended by the scholarship and bursary committee of New Westminster Senior Secondary School. Not eligible for travel allowance.

Mona F. East Memorial Entrance Scholarship

This fund provides a scholarship annually for the student graduating from Similkameen Secondary School with the highest standing and who will be attending Simon Fraser University. The amount of the award will vary, depending upon the accrued interest of the fund. Not eligible for travel allowance.

Rotary Club of Vancouver Sunrise Entrance Scholarship

The Rotary Club of Vancouver Sunrise provides an annual entrance scholarship from the interest earned on the endowment. The scholarship will be based on academic merit with preference for an entering student from King George Secondary School. The recipient of the scholarship will be invited to make a presentation at a meeting of the Rotary Club of Vancouver Sunrise. Not eligible for travel allowance.

For Canadian High School Students; No Application Required

All entering Canadian high school students are considered automatically for the following scholarships; no applications are required. Each scholarship consists of $3,500 or $5,000 distributed over two semesters.

$5,000 Academic Excellence Entrance Scholarships

Recognize academic excellence for high school students within Canada. Distributed over two terms. Eligible for travel allowance.

$3,500 Jack Diamond National Entrance Awards

Recognize academic and athletic excellence. Potential candidates are identified by Simon Fraser University, and nominated by our Director of Recreation and Athletics. Eligible for travel allowance. Distributed over two terms.

$3,500 Kenneth Strand National Scholarships

Recognize academic excellence for students outside of BC. Eligible for travel allowance. Distributed over two terms.

$3,500 Summit Scholarships

Recognize academic excellence for students within BC. Eligible for travel allowance. Distributed over two terms.

$3,500 Tadeusz Specht Memorial Scholarships in Applied Sciences

Recognize academic excellence. Awarded to students entering the Faculty of Applied Sciences and pursuing studies in the fields of kinesiology or other health-related sciences. Eligible for travel allowance. Distributed over two terms.

$3,500 Tadeusz Specht Memorial Scholarships in Science

Recognize academic excellence. Awarded to students entering the Faculty of Science and pursuing studies in biology, microbiology, chemistry, biochemistry, or other health-related sciences. Eligible for travel allowance. Distributed over two terms.
$1,000 TV5 Entrance Scholarships
The TVS Undergraduate Entrance Scholarship for French Cohort Program students will be awarded annually based on academic performance to students entering their first year of the French Cohort Program at SFU in the fall term. Not eligible for travel allowance.

For BC College Students; Application Required
BC College scholarship application deadlines: April 30 for admission to the fall term, September 30 for the spring term, and January 31 for the summer term.

$10,000 Honourable William M. Hamilton Scholarships
Recognize academic excellence and leadership potential. Distributed over four semesters. Eligible for travel allowance.

$7,000 Dean’s Scholarships
Dean’s Scholarships are awarded within each of the faculties of Applied Sciences, Arts, Business Administration, Education, Health Sciences, and Science, to recognize academic promise in a particular area of study. Distributed over four semesters. Eligible for travel allowance.

$3,500 Ken Caple Scholarships
Recognize outstanding academic performance. Students with a high transfer average from a BC college may automatically receive an offer of this scholarship. Distributed over two semesters. Eligible for travel allowance.

Columbia College Entrance Scholarship
This award provides financial support for an alumnus of Columbia College who will be attending Simon Fraser University. The award may be disbursed over one or two semesters, pending interest income from the endowment fund. Applicants must have graduated from Columbia College and be registered at Simon Fraser and show distinct promise of achievement at the undergraduate level. Applicants must also provide a letter of application and resume summarizing all awards, medals and prizes, leadership initiatives, and service as well as two letters of reference and certified copy of school transcript. Submit all documentation to Financial Aid and Awards at Simon Fraser University by May 30th. Not eligible for travel allowance.

For International Students – Application Required

$40,000 (plus tuition) W. Ronald Heath International Entrance Scholarships
Recognize international students attending United World Colleges who demonstrate academic excellence, school involvement, community service, leadership and volunteer activity. Distributed over 8 terms. Eligible for travel allowance. 

Gordon M. Shrum International Entrance Scholarship
Criteria: Academic excellence; international baccalaureate from a United World College; school involvement; community service; leadership; volunteer activity; participation in the arts or athletics. Minimum average: IB score 38/42 Value: $40,000 plus tuition Number: six Eligible for travel allowance.

$3,500 Phi Theta Kappa International Summit Scholarships
Recognize Phi Theta Kappa members with a minimum 3.75 GPA on minimum 30 credit hours from a U.S. college. Part-time students and students with a previous bachelor degree are not eligible. Distributed over two terms. Eligible for travel allowance.

Up to three entrance scholarships are made available for Phi Theta Kappa members with a minimum 3.75 GPA. A minimum of 30 credit hours required for application. Part-time students and students with a previous bachelors degree are not eligible. Eligible for travel allowance. 

Deadlines: April 30 for admission to the fall term, September 30 for the spring term, and January 31 for the summer term.

For International Students – No Application Required

$3,500 International Summit Recognizes academic excellence and potential. International students entering from a high school within Canada with a 90% average (or equivalent) will automatically receive an offer of this scholarship. This scholarship is entitled to the one-time travel allowance. Distributed over two terms.

Stanley Morisse Memorial Scholarships
The Stanley Morisse Memorial Scholarship is awarded to a student transferring from the University of Cyprus or a Canadian secondary school. The amount of the award is determined by the amount of interest earned on the endowment.

Scholarships for Continuing Students

Regulations
The following regulations govern all university, private and endowed scholarships for continuing students over which the University has jurisdiction. Many are made possible by generous donations. 

A minimum 3.50 CGPA is required to be eligible for a scholarship. 

The student must be registered in a minimum of nine credit hours of normally graded courses in the term of eligibility, unless otherwise stipulated. 

Challenge, audit and credit free courses are not considered. Students who register in fewer than nine credit hours or subsequently drop below nine hours may have their scholarships cancelled.

The student must have completed at least nine credit hours of normally graded courses at the University to be considered for most private and endowed scholarships.

A student holding an ongoing SFU Entrance Scholarship is not eligible for private scholarships until the entrance scholarship is fully paid out.

Funds will be credited to the successful student’s University account. Outstanding University debts will be deducted from the scholarship funds before a cheque for the credit balance is issued.

The student must apply on the Simon Fraser University Private Scholarship application form (http://students.sfu.ca/financialaid). It is the student’s responsibility to meet applicable deadlines and supply all required documentation. Incomplete applications may be rejected.

Unless otherwise stated, scholarships are tenable only at Simon Fraser University.

Candidates are permitted to hold concurrently more than one academic award only with the permission of Financial Aid and Awards.

Scholarships are tenable for the term indicated and will not normally be deferred. Students who do not register in the term for which the scholarship is granted forfeit the award. To be considered for future private or endowed scholarships, students must reapply.

Open Undergraduate Scholarship Program
The Undergraduate Open Scholarship recognizes and supports undergraduate students who are highly qualified academically and awards scholarships to students on a term by term basis.

Eligibility
Eligibility is limited to students pursuing a first degree and will expire when a student’s total accumulated credit hours (including transfer credit) exceed by 20% the minimum total accumulated credit and transfer credit required to complete the degree program in which the student is registered. (e.g., a student whose major program requires 120 credit hours to graduate becomes ineligible when her/his total accumulated credit and transfer credit exceeds 132 credit hours.)

To qualify, a student must have 
• successfully completed at least 24 SFU credit hours 
• a minimum Simon Fraser University cumulative grade point average of at least 3.600, with the eligible CGPA set according to the availability of funds. The threshold CGPA will be set as low as permitted by the availability of funds. (The minimum CGPA requirement for eligibility has been set at 3.700 in recent semesters.)

• a minimum term GPA of 3.500 in the last term of registration 
• been registered in one of the last three semesters 
• completed at least 24 credit hours of normally graded courses over their last three semesters of registration in such courses. For students who fall short of the 24 credit hour requirement because one term’s registration was in a single course of five credit hours or less, the last four semesters will be considered, and that term of one course will be set aside in determining credit hour and term GPA eligibility.

All eligibility requirements must be met.

Monetary Value
The value of the scholarship is set each year by the University as a portion of the actual tuition costs accrued by those eligible. International undergraduate students are eligible on the same basis as other students.

Co-operative education students will be eligible subject to normal program guidelines. Job practicum courses, however, are excluded from the calculations (i.e., the scholarship does not cover the co-op fee).

Registration in normally graded courses during a co-op term may affect eligibility. Co-op students should seek advice about this scholarship before registering in normally-graded courses while also registering in a co-op term.

Graduate students, including qualifying, special and exchange students, are not eligible for this scholarship.

No application is required. All students are considered for eligibility each term; eligible students will be notified no later than the end of the fourth week of classes.

In fiscal 2006/07, the scholarship was paid at a rate of $100 per credit hour for normally graded courses in the term. It is anticipated that the rate will be at least $100 per credit hour for fiscal 2007/08.

Scholarships for All Students

Hy Aisenstat Scholarship
Program code: UESO-517 Value: $2500 Awarded: fall, spring, summer Terms of reference: To undergraduate students with experience in the hospitality industry who are returning to University. Please document eligibility.

Alumni Scholarship and Bursary Endowment Fund
Program code: UESO-253 Value: $500 Awarded: fall, spring, summer Terms of reference: To undergraduate students who meet the minimum scholarship regulations.
Japanese-Canadian Centennial Scholarship
Program code: UPSO-255
Value: $750
Awarded: fall, spring
Terms of reference: To a Japanese-Canadian student residing in British Columbia and enrolled in the first year of study at Simon Fraser University. Eligibility for this scholarship will be based on scholastic ability, character, promise of achievement and participation in extracurricular activities. Applications will be considered from first year students.

Raytheon Canada Limited Scholarship for Native Students
Program code: UPSO-278
Value: $750
Awarded: fall
Terms of reference: To a native undergraduate student with high academic standing at Simon Fraser University. Preference will be given to students majoring in Engineering Science, Computing Science, Mathematics, Physics or Business Administration.

Joseph and Rosalie Segal Scholarship
Program code: UESO-254
Value: $1000
Awarded: fall
Terms of reference: To students with good academic records, and demonstrated service to the University or the community. The awards will be open to students in any faculty who have completed at least 60 credit hours of study.

Sulzer Pumps Inc. Undergraduate Scholarship
Program code: UPSO-286
Value: $1000
Awarded: spring
Terms of reference: Granted to an undergraduate student in any faculty based on academic merit. Preference will be given to applicants who are Sulzer Bingham employees; sons, daughters or legal dependants of Sulzer Bingham Pumps Inc. employees; or residents of Burnaby.

University Women’s Club of Vancouver Scholarship
Program code: UESO-526
Value: $1725
Awarded: spring
Terms of reference: Awarded to an undergraduate student in any faculty based on scholastic merit.

Vancouver Korean Canadian Scholarship Foundation Scholarship Award
Program code: UPSO-294
Value: $1000
Awarded: summer
Terms of reference: The scholarship will be made, based on academic merit, to a student attending a Korean exchange program through SFU International.

Scholarships for Applied Sciences Students

Association of Professional Engineers and Geoscientists Scholarship
Program code: UPSO-275
Value: $1500
Awarded: fall
Terms of reference: To a student with a high academic standing who is entering the second year of Engineering Science at Simon Fraser University. The assessment of academic standing will be based upon previous performance during the first year of engineering at another BC post-secondary institution. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the School of Engineering Science Scholarship Committee.

Channel M Scholarship in Communication
Program code: UESO-335
Value: $1000
Awarded: fall
Terms of reference: The scholarship will be awarded based on academic merit in any term to students with an approved Communication major. Preference will be given to students who are a member of a visible minority group. Recipients will be invited to Channel M for a tour at a mutually convenient time during the year in which they win the scholarship. The awards will be made by the Senate Undergraduate Awards Adjudication Committee.

Paul Coté Endowment Scholarship in Engineering
Program code: UESO-213
Value: $725
Awarded: spring
Terms of reference: To an Engineering Science student registered in the Faculty of Applied Sciences. The scholarship will be awarded on the basis of high academic performance to a student who has completed at least 60 credit hours at Simon Fraser University. This scholarship has been established by the Board of Governors.

Harold Hancheroff Memorial Scholarship in Sports Education
Program code: UESO-523
Value: $750
Awarded: spring
Terms of reference: To a full time student in the School of Kinesiology, who is pursuing an honors degree in sports education. The scholarship is also based upon academic merit.

Ken and Su Jang Scholarship for Women in Science
Program code: UESO-276
Value: $1900
Awarded: fall
Terms of reference: To an undergraduate female student in the Faculty of Applied Sciences or the Faculty of Science. The award will be based on academic merit.

School of Kinesiology Alumni Scholarships
Program code: UESO-319
Value: $500
Scholarships will be granted on the basis of academic performance to students in the School of Kinesiology.

Kodak Graphic Communications Canada Scholarship
Program code: UPSO-214
Value: $1000
Awarded: spring
Terms of reference: To Engineering Science students in the Faculty of Applied Sciences, who have successfully completed at least one year. Students will require a nomination from the Faculty, who will give consideration to academic standing as well as talent and interest expressed by the student in electro-optics, precision mechanics or instrumentation.

Elma Krбавac Undergraduate Scholarship in Computing Science
Program code: UESO-322
Value: $1400
Awarded: fall
Terms of reference: To an undergraduate student in Computing Science based on high academic standing and demonstrated volunteer involvement. Candidates should demonstrate their involvement in volunteer activities by providing such details in a resume and cover letter with their application.

Matthew LeDuc Memorial Scholarship in Computing Science
Program code: UESO-329
Value: $500
Awarded: spring
Terms of reference: Awarded on the basis of academic achievement to a Computing Science major, with demonstrated excellence in the field of computer graphics.

MDSI Mobile Data Solutions Inc. / Peter Kam Scholarship
Program code: UPSO-289
Value: $1500
Awarded: spring
Terms of reference: Granted to an undergraduate student in a major or honors program in the School of Engineering Science, Computer Engineering option or in the School of Computing Science. The successful candidate should have a CGPA of 3.8 and will have distinguished him/her self in an innovative manner in a project or assignment in the spirit of creativity and exploration exemplified by Mr. Peter Kam. Applications should include recommendations from his/her faculty supervisor.

Joe and Mary Merchant Scholarship
Program code: UESO-309
Value: $750
Awarded: summer
Terms of reference: A scholarship, based on scholastic merit, will be awarded to a full-time 3rd or 4th year undergraduate student in the Faculty of Science or the Faculty of Applied Sciences.

Fred and Elaine Moonen Scholarship in Communication
Program code: UESO-266
Value: $1000
Awarded: fall, spring
Terms of reference: To students majoring in Communication entering their fourth year of the Communication program. Preference will be given to students in the Honors program. A recommendation from the Chair of the Department of Communication is required. Applications should be submitted to the Director, School of Communication by January 2 (spring Award) and by September 1 (fall Award).

Orbital Technologies Inc. Scholarship in Computing Science
Program code: UESO-327
Value: $500
Awarded: summer
Terms of reference: The award will be given to an approved Computing Science major on the basis of academic performance and documented community service. Applications for the scholarship should also include a letter and resume chronicling volunteer service in the community. When possible, preference will be given to a female student.

Basil Peters/High Tech Exchange Group Scholarship
Program code: UESO-239
Value: $500
Awarded: spring
Terms of reference: The scholarship is given, based on academic merit, to upper level students in Engineering Science program studying in the areas of high frequency electronics. The scholarships will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the School of Engineering Science.

Raytheon Canada Limited Scholarship
Program code: UPSO-279
Value: $750
Awarded: fall
Terms of reference: To an undergraduate student with high academic standing who is entering or in their third year of Engineering Science, Computing Science or Management and Systems Science at Simon Fraser University.

J. Newton Robinson Memorial Scholarship
Program code: UESO-242
Value: $250
Awarded: fall
Terms of reference: To a Computing Science major, who has completed 60 credit hours at Simon Fraser. The scholarship will be based upon academic performance. This endowment has been established in memory of J. Newton Robinson, former member of the Simon Fraser University Board of Governors.

Scotiabank Student Scholar in the Faculty of Applied Sciences Award
Program code: UESO-325
Value: $1500
Awarded: spring
Terms of reference: The scholarship will be offered, based on academic performance, to full-time students in the Information Technology and Interactive Arts programs at the SFU Surrey Campus.

Paul and Helen Trussell Science Scholarship Fund
Program code: N/A
Value: $20000
Awarded: fall
Terms of reference: To a student entering their last two years of undergraduate study at a BC university or college. The applicant must be a Canadian citizen or Permanent Resident, and have completed secondary schooling in the Kootenay-Boundary area (School Districts No. 1-13 inclusive). To qualify, a candidate must be pursuing an undergraduate program leading to at least a Master’s or PhD degree in Natural or Applied Sciences, such as Agriculture, Engineering, Forestry and Fisheries. The award will cover the last two undergraduate years and the first two graduate years. Normally, a student must complete a minimum of 12 credit hours of graded coursework each term during tenure of the scholarship and maintain a 75% average. Apply to Science Council of British Columbia. <www.scbc.org/programs/scholarship_trussell.html>

University Women’s Club of Vancouver Women in Science Scholarship
Program code: UESO-260
Value: $1400
Awarded: fall
Terms of reference: To a female student enrolled in the Faculty of Science. The award is open to third or fourth year students majoring in Science or Applied Science programs. A recommendation from the Dean of Science and/or the Dean of Applied Science is required.

Weyerhaeuser Company Limited Scholarship in Engineering Science and Environmental Science
Program code: UPSO-302
Value: $3000
Awarded: fall
Terms of reference: The scholarship is awarded on the basis of exceptional academic performance to an undergraduate student with an approved major in Engineering Science and Environmental Science. The scholarship will rotate these approved majors in a three-year cycle outlined as thus: Year 1: approved major in Engineering Science; Year 2: approved major in Environmental Science with emphasis on Quantitative Techniques in Resource Management, Year 3: approved major in Environmental Science with any emphasis except Quantitative Techniques in Resource Management. When possible, preference will be given to students from a Weyerhaeuser operating community in Canada. The award is granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Engineering Science or the Director, Department of Environmental Science.

Scholarships for Arts and Social Sciences Students
Father Michael Bach Memorial Scholarship
Program code: UESO-256
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student enrolled in either the third or fourth year of the Humanities program. Friends, relatives and colleagues of the late Father Michael Bach have established an endowment fund to support one or more scholarships in the Humanities Program. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the department in recognition of outstanding scholastic ability.
Mary Batchelor Memorial Scholarship
Program code: UESO-257
Value: $1500
Awarded: spring
Terms of reference: To a student in the Psychology major or honors program. Selection by the Psychology Department will be based upon academic achievement and extracurricular involvement. Applicants must have completed at least 60 credit hours, of which 30 hours are of Simon Fraser University course work, and must also include a resumé with their applications.
Arthur and Eva Bell Award in Business Administration or Economics
Program code: UPSO-203
Value: $500
Awarded: fall
Terms of reference: To students in second, third or fourth year of Business Administration or Economics. Eligibility is based on need for financial assistance and high academic standing. Students must provide a copy of their current transcript with the application.
BOMA Undergraduate Scholarship in Urban Studies
Program code: UESO-306
Value: $1500
Awarded: spring
Terms of reference: Awarded to an undergraduate student in the Certificate in Urban Studies program based on scholastic merit.
Linda Brideau Memorial Scholarship
Program code: UESO-206
Value: $1300
Awarded: fall
Terms of reference: To an undergraduate student, who is majoring in Criminology. The award will be based on academic excellence and preference will be given to a student in the honors program or who has completed at least two years of study at Simon Fraser University.
Chien’s Cultural Foundation Scholarship
Program code: UESO-521
Value: $700
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration, or in the Faculty of Arts, preferably in Political Science. The Scholarship will be granted on the basis of outstanding academic performance. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

School for the Contemporary Arts Scholarship
Program code: UUAO-004
Value: $2000
Awarded: fall
Terms of reference: The purpose of this award is to recognize achievement of excellence in the Arts for outstanding artistic contribution, as evidenced in performance, exhibitions or research; as well as recognize leadership ability by providing an inspiring example to peers through the quality of artistic work, and by demonstrating ability to be self-motivated and self-directed in extra-curricular activities at Simon Fraser University or in the community at large. A 3.5 cumulative grade point average is required to receive and maintain the Scholarship and full time registration must be maintained during the tenure of the Scholarship. Further eligibility requires at least 48 graded credit hours at Simon Fraser University, a declared major and acceptance by the School for the Contemporary Arts. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School for Contemporary Arts.

School for the Contemporary Arts Alumni Scholarships
Program code: UESO-317
Value: $500
Awarded: fall
Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts.

Arthur and Eva Bell Award in Psychology
Program code: UPSO-309
Value: $1000
Awarded: spring
Terms of reference: To an undergraduate student pursuing a French major or a French Honours program on the basis of academic excellence and service to the Department of French or the French Department Student Union. Applications must include a resume outlining the candidate’s research interests. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Psychology.

Department of French Award for Excellence
Program code: UPSO-328
Value: $500
Awarded: summer
Terms of reference: The award will be given annually to a student pursuing a French major or a French Honours program on the basis of academic excellence and service to the Department of French or the French Department Student Union. Applications should include a resume outlining the student’s volunteer activities. The award will be made by the Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of French.

Mahatma Gandhi Humanitarian Scholarship
Program code: UPSO-220
Value: $350
Awarded: fall
Terms of reference: Offered by Dr. and Mrs. Devendra P. Goel to a student who has demonstrated overall excellence in the Humanities Program. Nomination required from the Dean of the Humanities Program.

Dr. Alfredo E. Hurtado Memorial Scholarship
Program code: UESO-274
Value: $500
Awarded: fall
Terms of reference: Scholarships will be granted on the basis of academic performance to students in the program for the Certificate in Urban Studies, School of the Contemporary Arts Alumni Scholarships. Program code: UPSO-309 Value: $1000 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. School for the Contemporary Arts Alumni Scholarships Program code: UESO-317 Value: $500 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. The Peter Crocker Annual Scholarship in Psychology Program code: UPSO-309 Value: $1000 Awarded: spring Terms of reference: The Peter Crocker Scholarship will be awarded to a 4th year undergraduate student involved in research in sport, or exercise, or health psychology. Applications must include a resume outlining the candidate’s research interests. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Psychology.

Department of French Award for Excellence Program code: UPSO-328 Value: $500 Awarded: summer Terms of reference: The award will be given annually to a student pursuing a French major or a French Honours program on the basis of academic excellence and service to the Department of French or the French Department Student Union. Applications should include a resume outlining the student’s volunteer activities. The award will be made by the Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of French.

Mahatma Gandhi Humanitarian Scholarship Program code: UPSO-220 Value: $350 Awarded: fall Terms of reference: Offered by Dr. and Mrs. Devendra P. Goel to a student who has demonstrated overall excellence in the Humanities Program. Nomination required from the Dean of the Humanities Program.

Dr. Alfredo E. Hurtado Memorial Scholarship Program code: UESO-274 Value: $500 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the program for the Certificate in Urban Studies, School of the Contemporary Arts Alumni Scholarships. Program code: UPSO-309 Value: $1000 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. School for the Contemporary Arts Alumni Scholarships Program code: UESO-317 Value: $500 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. The Peter Crocker Annual Scholarship in Psychology Program code: UPSO-309 Value: $1000 Awarded: spring Terms of reference: The Peter Crocker Scholarship will be awarded to a 4th year undergraduate student involved in research in sport, or exercise, or health psychology. Applications must include a resume outlining the candidate’s research interests. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Psychology.

Department of French Award for Excellence Program code: UPSO-328 Value: $500 Awarded: summer Terms of reference: The award will be given annually to a student pursuing a French major or a French Honours program on the basis of academic excellence and service to the Department of French or the French Department Student Union. Applications should include a resume outlining the student’s volunteer activities. The award will be made by the Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of French.

Mahatma Gandhi Humanitarian Scholarship Program code: UPSO-220 Value: $350 Awarded: fall Terms of reference: Offered by Dr. and Mrs. Devendra P. Goel to a student who has demonstrated overall excellence in the Humanities Program. Nomination required from the Dean of the Humanities Program.

Dr. Alfredo E. Hurtado Memorial Scholarship Program code: UESO-274 Value: $500 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the program for the Certificate in Urban Studies, School of the Contemporary Arts Alumni Scholarships. Program code: UPSO-309 Value: $1000 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. School for the Contemporary Arts Alumni Scholarships Program code: UESO-317 Value: $500 Awarded: fall Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School for the Contemporary Arts. The Peter Crocker Annual Scholarship in Psychology Program code: UPSO-309 Value: $1000 Awarded: spring Terms of reference: The Peter Crocker Scholarship will be awarded to a 4th year undergraduate student involved in research in sport, or exercise, or health psychology. Applications must include a resume outlining the candidate’s research interests. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Psychology.

Department of French Award for Excellence Program code: UPSO-328 Value: $500 Awarded: summer Terms of reference: The award will be given annually to a student pursuing a French major or a French Honours program on the basis of academic excellence and service to the Department of French or the French Department Student Union. Applications should include a resume outlining the student’s volunteer activities. The award will be made by the Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of French.
Ann and William Messenger Undergraduate Scholarship

Terms of reference: To a single parent enrolled in the Diploma Program who has an academic record of merit. Preference will be given, when possible, to a student from Prince George or surrounding areas. Students should apply on a Simon Fraser University Private Scholarship application form to be sent to the Gerontology Diploma Program, Simon Fraser University at Harbour Centre, 555 West Hastings Street, Vancouver, BC, V5B 5K3.

Value: $1000

Awarded: spring

Margaret J. Menzel Memorial Scholarship in Geography

Terms of reference: Scholarships will be granted on the basis of academic performance. To be eligible, candidates should have completed one 300 division management information systems course, demonstrate their involvement in extracurricular or volunteer activities and interest in information technology by providing their resume and cover letter specific to these interests, and include a letter of recommendation from a Management Information Systems or Computing Science faculty member with their application.

Value: $1100

Awarded: fall

Mr. and Mrs. Erwin Sommer Scholarship in Liberal and Business Studies

Terms of reference: Award will be granted to a Faculty of Arts student with at least 90 credit hours who exemplifies the aspects of a well-rounded student scholar: academic excellence and community involvement. Academic excellence is based on academic merit as determined by cumulative grade point average (cpga). Community involvement may be service to the university community or the community at large.

Value: $500

Awarded: summer

Lorne M. Kendall Memorial Scholarship in Psychology

Terms of reference: To an undergraduate or graduate Psychology student who, in the previous year, has best exemplified Dr. Kendall’s approach to Psychology. Applications for the award will be made by faculty members of the Psychology Department. The recipient will be selected by the Chair of the Department, after consultation with the Chair of the Undergraduate and Graduate Studies Committees.

Value: $1500

Awarded: spring

Jerry and Belle Lundie Memorial Scholarship

Terms of reference: Available to students in their second, third or fourth year of undergraduate study. One scholarship is available to a student majoring in Business Management and the other scholarship is available to an Economics major. Applicants must be Canadian citizens and residents of BC. Preference will be given to physically challenged students. The scholarships are made available by the Credit Union Foundation of BC, in honour of Mr. and Mrs. J. Lundie, who were Credit Union pioneers.

Value: $500

Awarded: spring

Margaret J. Menzel Memorial Scholarship

Terms of reference: To a single parent enrolled in the Women Studies program, on the basis of academic achievement. The Women’s Studies Co-ordinator will forward nomination(s) to Financial Aid and Awards.

Value: $1000

Awarded: spring

Ann and William Messenger Undergraduate Scholarships in English

Terms of reference: Awarded on the basis of academic achievement to approved English majors who have completed at least 90 credit hours.

Value: $2000

Awarded: fall, spring

Robbie Robertson Scholarship in Gerontology

Terms of reference: Awarded on the basis of academic achievement to approved English majors who have completed at least 90 credit hours.

Value: $1000

Awarded: fall

Terms of reference: The Prince George branch of the Royal Canadian Legion will provide a scholarship to be awarded to a student registered in the Gerontology diploma program who has an academic record of merit. Preference will be given, when possible, to a student from Prince George or surrounding areas. Students should apply on a Simon Fraser University Private Scholarship application form to be sent to the Gerontology Diploma Program, Simon Fraser University at Harbour Centre, 555 West Hastings Street, Vancouver, BC, V5B 5K3.

Value: $1000

Awarded: summer

Terms of reference: Award will be granted to a Faculty of Arts student with at least 90 credit hours who exemplifies the aspects of a well-rounded student scholar: academic excellence and community involvement. Academic excellence is based on academic merit as determined by cumulative grade point average (cpga). Community involvement may be service to the university community or the community at large.

Value: $225

Awarded: fall

Terms of reference: To a third or fourth year student who is a French major in a degree program. The scholarship will be adjudicated on the basis of proficiency in French and academic standing.

Value: $225

Awarded: spring

Terms of reference: To the student who has the second highest CGPA among political science majors who have surpassed 90 credit hours during that term. To be eligible, the student must have taken at least two 200 division and at least 3 senior (300 or 400 division) courses in Simon Fraser Political Science Department. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Political Science Department.

Value: $1000

Awarded: fall

Terms of reference: To an undergraduate student majoring in Spanish and/or Latin American Studies.

Value: $400

Awarded: summer

Terms of reference: To the student who has the highest CGPA among political science majors who have surpassed 90 credit hours during that term. To be eligible, the student must have taken at least two 200 division and at least 3 senior (300 or 400 division) courses in Simon Fraser Political Science Department. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Political Science Department.

Value: $1000

Awarded: summer

Terms of reference: To an undergraduate or graduate Psychology student who, in the previous year, has best exemplified Dr. Kendall’s approach to Psychology. Applications for the award will be made by faculty members of the Psychology Department. The recipient will be selected by the Chair of the Department, after consultation with the Chair of the Undergraduate and Graduate Studies Committees.

Value: $1500

Awarded: spring

Terms of reference: Granted on the basis of academic performance, to a student whose tuition fees are not being subsidized by an employer. Candidate will be selected by the Chair of the Liberal and Business Studies Program in consultation with the Liberal and Business Studies Academic Steering Committee.

Value: $375

Awarded: summer

Terms of reference: Available to students in their second, third or fourth year of undergraduate study. One scholarship is available to a student majoring in Business Management and the other scholarship is available to an Economics major. Applicants must be Canadian citizens and residents of BC. Preference will be given to physically challenged students. The scholarships are made available by the Credit Union Foundation of BC, in honour of Mr. and Mrs. J. Lundie, who were Credit Union pioneers.

Value: $500

Awarded: spring

Terms of reference: To a single parent enrolled in the Women Studies program, on the basis of academic achievement. The Women’s Studies Co-ordinator will forward nomination(s) to Financial Aid and Awards.

Value: $1000

Awarded: spring

Terms of reference: Available to students in their second, third or fourth year of undergraduate study. One scholarship is available to a student majoring in Business Management and the other scholarship is available to an Economics major. Applicants must be Canadian citizens and residents of BC. Preference will be given to physically challenged students. The scholarships are made available by the Credit Union Foundation of BC, in honour of Mr. and Mrs. J. Lundie, who were Credit Union pioneers.

Value: $500

Awarded: summer

Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Business Administration.

Value: $1500

Awarded: fall

Terms of reference: To a student in their final year of an undergraduate program who intends to pursue a career in business. Preference will be given to a student who has graduated from a BC secondary school. At least one letter of recommendation from a Dean or Department Chair must be submitted with the application.

Value: $700

Awarded: fall

Terms of reference: To an undergraduate student in the Faculty of Business Administration, or in the Faculty of Arts, preferably in Political Science. The Scholarship will be granted on the basis of outstanding academic performance. The award will be given to a Business Administration co-op student.

Value: $1300

Awarded: fall

Terms of reference: To students in second, third or fourth year of Business Administration with a concentration in either Finance or Accounting. Preference will be given to a graduate of either a Burnaby secondary school or Magee Secondary School. The scholarship will be granted on the basis of outstanding academic performance.

Value: $500

Awarded: fall

Terms of reference: To an undergraduate third or fourth year student in the Faculty of Business Administration with a concentration in either Finance or Accounting. Preference will be given to a graduate of either a Burnaby secondary school or Magee Secondary School. The scholarship will be granted on the basis of outstanding academic performance.

Value: $500

Awarded: fall

Terms of reference: To a student in their final year of an undergraduate program who intends to pursue a career in business. Preference will be given to a student who has graduated from a BC secondary school. At least one letter of recommendation from a Dean or Department Chair must be submitted with the application.

Value: $1500

Awarded: fall

Terms of reference: To a student in their final year of an undergraduate program who intends to pursue a career in business. Preference will be given to a student who has graduated from a BC secondary school. At least one letter of recommendation from a Dean or Department Chair must be submitted with the application.

Value: $1500

Awarded: fall

Terms of reference: To an undergraduate third or fourth year student in the Faculty of Business Administration with a concentration in either Finance or Accounting. Preference will be given to a graduate of either a Burnaby secondary school or Magee Secondary School. The scholarship will be granted on the basis of outstanding academic performance.

Value: $1500

Awarded: fall

Terms of reference: To students in second, third or fourth year of Business Administration or Economics. Eligibility is based on need for financial assistance and high academic standing. Students must provide a copy of their current transcript with the application.

Value: $500

Awarded: summer

Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Business Administration.

Value: $500

Awarded: summer

Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Business Administration.

Value: $500

Awarded: summer

Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Business Administration.

Value: $500

Awarded: summer

Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Business Administration.
be made by the Senate Undergraduate Awards Adjudication Committee.

Chinese Federation of Commerce of Canada Scholarship  
Program code: UESO-525  
Value: $1100  
Awarded: spring  
Terms of reference: Award is based on academic merit and will be given to a full-time undergraduate student in the Faculty of Business Administration.

Cloverdale Paint Incorporated Scholarship  
Program code: UESO-272  
Value: $600  
Awarded: spring  
Terms of reference: To an undergraduate, upper level student in the Faculty of Business Administration, whose area of study is marketing. The award will be based on academic merit. Preference will be given to Cloverdale Paint employees or their children.

Deloitte & Touche Scholarship in Accounting  
Program code: UPSO-247  
Value: $1250  
Awarded: fall, spring  
Terms of reference: Granted to a third year Faculty of Business Administration student in the Accounting concentration who has the highest cumulative grade point average (CGPA). The scholarship is based on academic merit.

Great-West Life Scholarship in Business Administration  
Program code: UPSO-219  
Value: $1500  
Awarded: fall  
Terms of reference: To an undergraduate third or fourth year student in the Faculty of Business Administration concentrating in the area of finance. The scholarship is based on academic merit.

The Methanex Robert Findlay Annual Undergraduate Scholarship in Management Information Systems  
Program code: UPSO-311  
Value: $3500  
Awarded: spring  
Terms of reference: The Methanex Undergraduate Scholarship will be granted annually to a student in his or her 3rd or 4th year of study in the Management Information Systems concentration in the Faculty of Business Administration. Academic achievement is the primary criterion in evaluating candidates, although demonstrated leadership and volunteerism in campus and community affairs may be taken into account. The scholarship recipient may be invited to apply for a co-operative education placement with Methanex should an opportunity be available. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

The Great-West Life Scholarship in Business Administration  
Program code: UESO-324  
Value: $1000  
Awarded: fall  
Terms of reference: The award will be made to a full-time undergraduate student who is in their fourth year of study in the Faculty of Business Administration on the basis of academic performance and demonstrated volunteer involvement. To be considered eligible, candidates should demonstrate their involvement in volunteer activities by providing their resume and cover letter specific to these interests.

Honourable William M. Hamilton Memorial Scholarship  
Program code: UESO-305  
Value: $2500  
Awarded: fall, spring, summer  
Terms of reference: The scholarship, based on academic merit, will be awarded to a student entering the Faculty of Business Administration at SFU with at least 30 credit hours.

Bruce Howe Memorial Scholarship in International Business  
Program code: UESO-310  
Value: $800  
Awarded: spring  
Terms of reference: The award, based on academic merit, will be given to the top student in the Faculty in Business Administration in the international business concentration. The applicant should be a Canadian citizen or a permanent resident of Canada and have completed at least 90 credit hours.

Human Resources Management Association of BC Scholarship  
Program code: UPSO-226  
Value: $1000  
Awarded: fall  
Terms of reference: The scholarship will be granted to a Faculty of Business Administration student with an approved concentration in human resources management who has completed at least two human resources management courses at the 300 division. The scholarship will be granted on the basis of academic performance, with consideration given to improved academic performance, and reports of practicum work performance and the expressed intent of becoming a Chartered Accountant. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the candidates by the Co-ordinator, Business Administration Co-operative Education Accounting Program.

ICABC Business Administration Co-Op Education Scholarship  
Program code: UPSO-228  
Value: $2000  
Awarded: spring  
Terms of reference: To a full-time undergraduate student in the Faculty of Business Administration Co-operative Education Program (CA stream). Candidates should have completed at least one practicum work term after being accepted into the Co-operative Education program before eligibility is determined. The scholarship will be granted on the basis of academic performance, with consideration given to improved academic performance, and reports of practicum work performance and the expressed intent of becoming a Chartered Accountant. The scholarship will be granted on the basis of academic performance.

ICABC Desmond O’Brien Memorial Scholarship  
Program code: UPSO-227  
Value: $2000  
Awarded: spring  
Terms of reference: To a full-time undergraduate student in the Faculty of Business Administration. The student will have completed 75 to 105 term credit hours inclusive, including the term of application, and must have at least 9 hours of accounting courses. The scholarship will be granted on the basis of academic performance.

ISACA Vancouver Chapter Scholarship  
Program code: UPSO-300  
Value: $250  
Awarded: summer  
Terms of reference: The ISACA scholarship will be awarded to the top student of the year in BUS 426, an auditing course. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Faculty of Business Administration.

The KPMG Annual Award in Accounting  
Program code: UPSO-307  
Value: $2500  
Awarded: spring, fall  
Terms of reference: The award will be granted to a 3rd or 4th year student in the Accounting concentration of a Bachelor of Business Administration on the basis of demonstrated academic achievement, extra-curricular activities, community involvement, and the ability to lead others. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Maria Kuchar Accounting Scholarship  
Program code: UESO-283  
Value: $3000  
Awarded: fall  
Terms of reference: Maria Kuchar Accounting Scholarships are awarded in two disbursements, will be awarded in the fall term to 3rd or 4th year undergraduate student in the Faculty of Business Administration majoring in Accounting. When possible, preference will be given to a female student.

Robert H. Lee Scholarship in Business Administration  
Program code: UESO-271  
Value: $1600  
Awarded: fall  
Terms of reference: To a third or fourth year student who is majoring in Business Administration. The award is also based upon academic achievement.

Jerry and Belle Lundie Memorial Scholarship  
Program code: UPSO-231  
Value: $250  
Awarded: spring  
Terms of reference: Available to students in their second, third or fourth year of undergraduate study. One scholarship is available to a student majoring in Business Management and the other scholarship is available to an Economics major. Applicants must be Canadian citizens and residents of BC. Preference will be given to physically challenged students. The scholarships are made available by the Credit Union Foundation of BC, in honour of Mr. and Mrs. J. Lundie, who were Credit Union pioneers.

Gil Moser Memorial Scholarship  
Program code: UESO-238  
Value: $1600  
Awarded: spring  
Terms of reference: To a full time student in the Faculty of Business Administration on the basis of high academic standing. This endowment fund has been established in memory of the late Gil Moser who served Simon Fraser University on its Board of Governors.

Mr. Sub Scholarship in Business Administration  
Program code: UPSO-296  
Value: $500  
Awarded: summer  
Terms of reference: To a full-time student in the Faculty of Business Administration based on academic performance and demonstrated community volunteer involvement. Applications should include supporting document(s) describing such involvement.

Pacific Blue Cross Scholarship in Management & Organizational Studies  
Program code: UPSO-304  
Value: $1000  
Awarded: summer  
Terms of reference: The scholarship will be awarded, based on academic merit, to a third or fourth year student in Bachelor of Business Administration concentrating in Management & Organizational Studies.

Phillips, Hager & North Ltd Scholarship  
Program code: UPSO-282  
Value: $2000  
Awarded: fall  
Terms of reference: To an undergraduate third or fourth year student within the Faculty of Business Administration with a Finance concentration. This scholarship is based on academic merit.

Robert Rogow Scholarship  
Program code: UESO-527  
Value: $2500  
Awarded: spring
Terms of reference: Granted on the basis of academic merit, to undergraduate students in the Faculty of Business Administration with a concentration in Human Resources Management. The recipient will have completed at least one SPU credit course offered by the Faculty of Business Administration in industrial relations or collective bargaining.

**Scotiabank Student Scholar in the Faculty of Business Administration Award**
Program code: UESO-313
Value: $1300
Awarded: fall
Terms of reference: To a full-time undergraduate student enrolled in the co-op program of the Faculty of Business Administration.

**Lorraine Wintrup Memorial Endowment Scholarship**
Program code: UESO-251
Value: $225
Awarded: spring
Terms of reference: An endowment fund has been established in memory of Mrs. Lorraine Wintrup. A scholarship is available to a Business Administration student majoring in Business Management with preference being given to banking related courses. Please supply a copy of your transcript and indicate any Business Management and Banking related courses.

**Grant Wilson Memorial Scholarship**
Program code: UESO-268
Value: $3300
Awarded: fall
Terms of reference: To a BC student in the Faculty of Business Administration who is entering the final two semesters of study at Simon Fraser. The applicant must be planning to enter Law school. This endowment fund has been established in memory of Grant Wilson by Stanley Pharmaceuticals Limited of North Vancouver, BC.

**Scotiabank Student Scholar in the Faculty of Education Award**
Program code: UESO-314
Value: $2000
Awarded: summer
Terms of reference: Award will be granted to a student in the PDP program who exemplifies the aspects of a well-rounded student scholar; academic excellence and community involvement. Community involvement may be service to the university community or the community at large.

**Shell Canada Limited Scholarship in Business Administration**
Program code: UESO-264
Value: $725
Awarded: fall
Terms of reference: To an undergraduate student with at least 90 credit hours who exemplifies the aspects of a well-rounded student scholar; academic excellence and community involvement. Academic excellence is based on academic merit as determined by cumulative grade point average (CGPA). Community involvement may be service to the university community or the community at large.

**Vancouver Security Traders Association (VSTA) Annual Scholarship in Finance**
Program code: UPSO-310
Value: $2000
Awarded: spring
Terms of reference: The scholarship will be awarded on the basis of academic merit to a third year undergraduate Business Administration student with an approved concentration in Finance. The scholarship is renewable for a second year if the recipient maintains the scholarship requirements. Where possible, preference will be given to a student who has an interest in pursuing a career in Equity Trading and has completed the Canadian Securities Course or Trader Training Course. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

**Lis Welch Scholarship in Marketing**
Program code: UESO-522
Value: $725
Awarded: fall
Terms of reference: Granted to an undergraduate student in the Faculty of Business Administration with a concentration in marketing, who is in third or fourth year. The award will be based on academic merit. Preference will be given to a female student who is a Canadian citizen or landed immigrant.

**Westminster Savings Barry Butler Memorial Scholarship**
Program code: UPSO-299
Value: $2500
Awarded: fall
Terms of reference: The scholarship will be awarded in the fall term to an outstanding third or fourth year undergraduate student in the Faculty of Business Administration on the basis of academic performance.

**Grant Wilson Memorial Scholarship**
Program code: UESO-268
Value: $3300
Awarded: fall
Terms of reference: To a BC student in the Faculty of Business Administration who is entering the final two semesters of study at Simon Fraser. The applicant must be planning to enter Law school. This endowment fund has been established in memory of Grant Wilson by Stanley Pharmaceuticals Limited of North Vancouver, BC.

**Scotiabank Student Scholar in the Faculty of Education Award**
Program code: UESO-314
Value: $2000
Awarded: summer
Terms of reference: Award will be granted to a student in the PDP program who exemplifies the aspects of a well-rounded student scholar; academic excellence and community involvement. Community involvement may be service to the Faculty, the university community or the community at large.

**Ethel Barbara Tuck Undergraduate Scholarship in Education**
Program code: UESO-321
Value: $1500
Awarded: fall, spring, summer
Terms of reference: Granted on the basis of outstanding academic performance to undergraduate upper division students who intend to pursue careers teaching children or youth and wish to develop skills in aiding pupils who have reading difficulties. The application should include a discussion of the student's interest in teaching remedial reading.

**Scholarships for Science Students**
Program code: UESO-306
Value: $1500
Awarded: fall
Terms of reference: One APEGBC Scholarship in Earth Sciences valued at $1500 will be made available annually in any term, based on academic merit, to a 4th year student with an approved Earth Sciences major and proved participation in the Geology or Environmental Geoscience stream of Earth Sciences, leading to an eventual Professional Geoscientist designation. The award will be made by the Senate Undergraduate Awards Adjudication Committee on Scholarships Awards and Bursaries upon nomination by the Chair, Earth Sciences.

**Chemistry Undergraduate Scholarship**
Program code: UESO-322
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student(s) in their final year of an approved major or honors degree in chemistry on the basis of academic performance in upper level chemistry and nuclear science courses. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of Chemistry.

**R. Bruce Coles Memorial Scholarship**
Program code: UESO-283
Value: $650
Awarded: spring
Terms of reference: To a student in an approved Actuarial Science program who has completed ACMA 320. More than one scholarship may be made available. Scholarships will be granted on the basis of academic performance. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Actuarial Science.

**Earth Sciences Undergraduate Scholarship**
Program code: UESO-334
Value: $2500
Awarded: fall
Terms of reference: To an undergraduate student(s) in their final year of an approved major or honors degree in their final year of an approved major or honors degree...
in earth sciences based on academic performance in upper level earth sciences courses.

**Goel Memorial Scholarship**
Program code: UESO-223
Value: $350
Awarded: fall
Terms of reference: To a student who has demonstrated overall excellence in the Department of Mathematics. Nomination required from the Chair of Mathematics. This scholarship has been established by Dr. and Mrs. D.P. Goel in memory of Mrs. Shakuntala Goel.

**Ken and Su Jang Scholarship for Women in Science**
Program code: UESO-276
Value: $1900
Awarded: spring
Terms of reference: To an undergraduate female student in the Faculty of Applied Sciences or the Faculty of Science. The award will be based on academic merit.

**Ron MacLeod Scholarship in Environmental Science**
Program code: UESO-307
Value: $950
Awarded: spring
Terms of reference: Granted to a third or fourth year student in the Environmental Science Program on the basis of academic performance. The application should include a letter from the student describing his/her commitment to and interest in environmental science.

**William and Amelia McMahan Scholarships**
Program code: UESO-233
Value: $1400
Awarded: fall
Terms of reference: To students who are enrolled in full course programs in the Faculty of Science, preferably to students who are in their first or second year of study and who have high academic standing will be considered. Preference will be given to students who are children of employees or former employees of the logging and pulp division of Canadian Forest Products Ltd. or its subsidiaries, affiliate companies or successors.

**Patrick Duncan McGaTaggart-Cowan Award in Physical Sciences**
Program code: UESO-234
Value: $850
Awarded: spring
Terms of reference: This scholarship fund was established in honour of Dr. Patrick Duncan McGaTaggart-Cowan. This fund will provide for a student in the physical sciences on the basis of academic achievement and potential, with consideration being given to financial need. Special consideration will be given to a student who plans to proceed to studies in meteorology or the atmospheric sciences or who has demonstrated interest or aptitude in these fields, and preference might be given to a third year student going into the graduating year in an honors program.

**Joe and Mary Merchant Scholarship**
Program code: UESO-309
Value: $750
Awarded: summer
Terms of reference: A scholarship, based on scholastic merit, will be awarded to a full-time 3rd or 4th year undergraduate student in the Faculty of Science or the Faculty of Applied Sciences.

**Molecular Biology and Biochemistry Undergraduate Scholarship**
Program code: UESO-333
Value: $500
Awarded: fall
Terms of reference: To an undergraduate student(s) in their final year of an approved major or honours degree in Molecular Biology and Biochemistry on the basis of academic performance.

**Pacific Blue Cross Scholarship in Actuarial Science**
Program code: UPSO-303
Value: $1000
Awarded: spring
Terms of reference: The scholarship will be made available, based on academic merit, to a third or fourth year student with a declared major in Actuarial Science. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Statistics & Actuarial Science.

**Evelyn and Leigh Palmer Scholarship**
Program code: UESO-267
Value: $3000
Awarded: fall
Terms of reference: The scholarships are granted in any term of academic to undergraduate students in a major or honors program in the physical sciences (Physics, Applied Physics, Mathematical Physics, Chemical Physics, Chemistry, Molecular Biology and Biochemistry, or Physics and Physiology). Applicants should have completed at least 60 SFU credit hours toward the requirements for a degree and have completed at least 30 hours in two of the last three semesters in which they were enrolled.

**Quadra Chemicals Ltd. Scholarship**
Program code: UESO-270
Value: $850
Awarded: spring
Terms of reference: To a full-time undergraduate student who is registered in second, third, or fourth year of study, majoring in either chemistry or biochemistry in the Faculty of Science. Applicants must demonstrate exceptional ability and not be recommended for an NSERC summer Research Scholarship.

**Beverley Raymond Memorial Scholarship Endowment Fund**
Program code: UESO-528
Value: $1500
Awarded: fall
Terms of reference: This fund provides an award for an undergraduate student in Biological Sciences or Environmental Sciences who has demonstrated interest and aptitude in these fields through academic achievement (minimum cgpa 3.00) and outdoor activities. Preference will be given to a student in their graduating year of an honors program with an honors project relating to environmental studies. The application should include a letter from the student supporting their qualifications for the award and outlining their career plans and interest in the environment. The awards will be made by the Senate Undergraduate Awards Adjudication Committee.

**Faculty of Science Alumni Scholarships**
Program code: UESO-320
Value: $500
Awarded: summer
Terms of reference: Scholarships will be granted on the basis of academic performance to students in the Faculty of Science.

**Scotiabank Student Scholar in the Faculty of Science**
Program code: UESO-315
Value: $2000
Awarded: summer
Terms of reference: Award will be granted to a Faculty of Science student with at least 90 credit hours who exemplifies the aspects of a well-rounded student scholar; academic excellence and community involvement. Admission to this scholarship is based on academic merit as determined by cumulative grade point average (CGPA). Community involvement may be service to the university community or the community at large.

**Mr. and Mrs. Erwin Sommer Scholarship in Earth Sciences/Geography**
Program code: UESO-308
Value: $1000
Awarded: fall
Terms of reference: Granted in alternate between Geography and Earth Sciences students, on the basis of academic merit to a student majoring in geography or earth sciences who has completed at least 90 undergraduate credits including 12 upper division credits in geography or earth sciences.

**Trans-Canada Pipelines Research Scholarship**
Program code: UESO-261
Value: $725
Awarded: spring
Terms of reference: To a student presently enrolled in a four year program leading to a BSc in Chemistry. The Department of Chemistry Scholarship Committee will nominate a candidate for the scholarship on the basis of the applicant's potential for future work in research in chemistry related to the petrochemical industry and on the applicant's interest in such work.

**Paul and Helen Trussell Science Scholarship Fund**
Program code: N/A
Value: $20000
Awarded: fall
Terms of reference: To a student entering their last two years of undergraduate study at a BC university or college. The applicant must be the child of a Canadian citizen or Permanent Resident, and have completed secondary schooling in the Kootenay-Boundary area (School Districts No. 1-13 inclusive). To qualify, a candidate must be pursuing an undergraduate program leading to at least a Master's or PhD degree in Natural or Applied Sciences, such as Agriculture, Engineering, Forestry and Fisheries. The award will cover the last two undergraduate years and the first graduate years. Normally, a student must complete a minimum of 12 credit hours of graded course work each term during tenure of the scholarship and maintain a 75% average. Apply to Science Council of British Columbia. <www.scbc.org/programs/scholarship_trussell.html>
### Undergraduate

#### Scholarships for Student Athletes

- **Bill De Vries Athletic Award**
  - Program code: UEAA-061
  - Value: $295
  - Terms of reference: Awards will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as a member of a varsity team.

- **Howie Larke Scholarship in Sport Information**
  - Program code: UEAA-052
  - Value: $35
  - Terms of reference: To a full time undergraduate student involved in sport information. The scholarship will be based on academic merit.

- **Simon Fraser University Athletic Scholarships**
  - Program code: UUAO-102
  - Value: $295
  - Terms of reference: Two scholarships valued at $1,000 each are available to students who demonstrate outstanding and sustained athletic performance on an intercollegiate team. Students must be registered in nine credit hours of normal graded courses in the term of application, unless otherwise indicated. Challenge, audit, and credit free courses will not be considered. Students who register in fewer than nine credit hours or subsequently drop below nine hours may have their awards cancelled.

- **Simon Fraser University Track and Field Alumni Scholarship**
  - Program code: UEAA-042
  - Value: $500
  - Terms of reference: Based on academic merit and will be awarded to a student who is a member of the SFU Track and Field team.

#### Bursaries

- **Bursaries for All Students**
  - Program code: UUBO-516
  - Value: $250
  - Terms of reference: Bursaries are tenable only for the term indicated on the University bursary application form via the student information system (http://go.sfu.ca). It is the student's responsibility to meet applicable deadlines and supply all required documentation. Incomplete applications may be rejected.

- **Alumni Scholarship and Bursary Endowment Fund**
  - Program code: UEBO-516
  - Value: $250
  - Terms of reference: Bursaries are available each term to students in good academic standing on the basis of demonstrated financial need. The Senate Awards Adjudication Committee will make the awards.

#### Bursaries

- **Aboriginal Student Bursary Program**
  - Program code: UUBO-551
  - Value: $700
  - Terms of reference: The BC Coalition of People with Disabilities/Rick Watson Bursary
  - Program code: UUBO-551
  - Value: $700
  - Terms of reference: To an undergraduate student in any faculty. The bursary is awarded to a student who has financial need in the continuing pursuit of their studies. Preference will be given to students who are former employees of Bel-Par Industries or who are children or legal dependants of employees.

- **Birks Family Foundation Bursary**
  - Program code: UUBO-698
  - Value: $1000
  - Terms of reference: Bursaries are a supplemental source of funding for students in high financial need. Students are expected to find their primary funding through other sources such as government student loan or grant programs, part time work, savings, family, etc.

- **Weyerhaeuser Company Limited Scholarship in Engineering Science and Environmental Science**
  - Program code: UPSO-302
  - Value: $3000
  - Terms of reference: The scholarship is awarded to a student who is a member of the SFU Track and Field team.

- **Aboriginal Student Bursary Program**
  - Program code: UUBO-698
  - Value: $1000
  - Terms of reference: Bursaries are available each term in the spring term to undergraduate students who are children or legal dependants of employees.

#### Undergraduate

- **McKenzie Bursary for First Nations Students**
  - Program code: UEBO-540
  - Value: $400
  - Terms of reference: Awards will be given to students who are members of the Squamish, Fort Langley, or Cheam First Nations and who have demonstrated volunteer involvement in service to the university or the community at large. The bursary may be granted to graduate or undergraduate students in all disciplines and fields of study. The successful student will have completed a minimum of 30 credits and will have achieved a minimum cumulative GPA of 2.0.

- **Simon Fraser University Athletic Scholarships**
  - Program code: UUAO-102
  - Value: $295
  - Terms of reference: Awards will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as a member of a varsity team.

- **Simon Fraser University Athletic Scholarships**
  - Program code: UUAO-102
  - Value: $295
  - Terms of reference: To a full time undergraduate student involved in sport information. The scholarship will be based on academic merit.

- **Simon Fraser University Track and Field Alumni Scholarship**
  - Program code: UEAA-042
  - Value: $500
  - Terms of reference: Based on academic merit and will be awarded to a student who is a member of the SFU Track and Field team.

- **Simon Fraser University Athletic Scholarships**
  - Program code: UUAO-102
  - Value: $295
  - Terms of reference: To a full time undergraduate student involved in sport information. The scholarship will be based on academic merit.
in any faculty who are in satisfactory academic standing and demonstrate financial need.

The Honourable Angelo E. Branca and Mrs. Branca Bursary
Program code: UEB0-586
Value: $800
Awarded: fall
Terms of reference: To students entering from secondary school. Applicants must demonstrate financial need and have satisfactory academic standing. Other bursaries valued approximately at one term’s tuition are available to students from any faculty, who have a minimum of 60 credit hours at Simon Fraser University, have maintained satisfactory standing, and are in financial need. In honour of the 50th wedding anniversary of the Honourable Angelo E. Branca and Mrs. Branca, and on the occasion of his retirement from the bench, this bursary endowment fund has been established by the following donors, Confratellanza Italo-Canadese and friends, Mr. J. Diamond, Mr. J. Segal, Mr. Ben Wosk.

Bursary Charitable Foundation Bursary
Program code: UEB0-554
Value: $750
Awarded: fall
Terms of reference: To a student with any physical disability. Evaluation will occur in consultation with the Physically Challenged Students’ Co-ordinator.

Harvey and Dorothy Burt Bursary
Program code: UEB0-587
Value: $600
Awarded: fall
Terms of reference: One or more bursaries will be awarded each year on the basis of financial need and demonstrated active involvement in the areas of conservation or environmental protection. Preference will be given to Canadian undergraduate students in their third or fourth year of studies.

Emily Campbell Bursary Endowment Fund
Program code: UEB0-589
Value: $125
Awarded: fall, spring, summer
Terms of reference: To students, staff and faculty parents who require some assistance with their daycare fees. Further information may be obtained from the Simon Fraser University Childcare Office. The Simon Fraser University Childcare Society and Simon Fraser University, through this fund, are committed to providing access to daycare services for children in the University community.

Campus Community Bursary
Program code: UEB0-718
Value: $500
Awarded: fall, spring, summer
Terms of reference: Granted to undergraduate students in any faculty in any term based on demonstrated financial need and satisfactory academic academic performance.

Canadian Federation of University Women – Coquitlam Bursary
Program code: UEB0-713
Value: $750
Awarded: spring
Terms of reference: To a full-time mature undergraduate female student in any faculty who has returned to SFU after a break in studies. Preference, where possible, will be given to a resident of School District #43 or a graduate of a School District #43 secondary school.

Jim and Penny Cavers Bursary
Program code: UEB0-732
Value: $2000
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in any faculty and who have completed at least 60 credit hours.

Chancellor’s Undergraduate Bursary
Program code: UEB0-709
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students in any faculty on the basis of demonstrated financial need and satisfactory academic performance.

Chapman Foundation Graduate and Undergraduate Bursaries
Program code: UEB0-744
Value: $250
Awarded: spring
Terms of reference: The Chapman Foundation Graduate and Undergraduate Bursaries will be awarded to students in any Faculty in good academic standing on the basis of demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Mr. and Mrs. Leslie Chu Bursary
Program code: UEB0-697
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in any faculty. Bursaries will be granted on the basis of demonstrated financial need, demonstrated service to the community, and a satisfactory academic performance.

Confratellanza Italo-Canadiane Bursary
Program code: UEB0-581
Value: $450
Awarded: fall
Terms of reference: To undergraduate students with financial need and satisfactory academic standing. Preference will be given to Italo-Canadian students if they meet the criteria.

Connell Lightbody Endowment Bursary
Program code: UEB0-649
Value: $1000
Awarded: fall
Terms of reference: To full-time third year student planning to study law. Please provide a brief letter concerning your eligibility for this bursary. This bursary, established by the Connell Lightbody law firm is in recognition of the outstanding contributions made by Dr. Arthur Fouks to both the legal community of Vancouver and the development of Simon Fraser University.

Colin A. Conrad Bursary
Program code: UEB0-728
Value: $500
Awarded: summer
Terms of reference: To an undergraduate student in any faculty based on demonstrated financial need and satisfactory academic performance.

CUPE Local 15 Vancouver Municipal, Education and Community Workers’ Bursary
Program code: UEB0-580
Value: $1000
Awarded: fall
Terms of reference: To an applicant must be the sons, daughters, or legal dependants of Union members. The member upon whom the applicant is a dependant must be a current member in good standing or retired member of CUPE Local 15 (excluding associate members). The member must have demonstrated a primary attachment to CUPE Local 15 by holding Union membership through a minimum of six months employment for each of the two years prior to the date of enrolment and must be pursuing a field of study not in contradiction to the aims of the labour movement. The award selection will be made by Simon Fraser University in consultation with the Executive. Award will be based primarily upon financial need and provided that academic performance is satisfactory. The applicant must be beginning or continuing full-time enrolment and must be capable of pursuing the course of study. An applicant for a bursary may only receive a bursary once every four years. Bursaries are to a maximum of $1,000 of tuition only. One half of the tuition will be paid at the beginning of the school year and the second half will be paid at the second half of the school year. Bursary recipients are requested to submit proof of completion of program/year for which the bursary was provided.

Alfred William Davidson Bursary
Program code: UEB0-726
Value: $500
Awarded: spring
Terms of reference: Granted to undergraduate students in any faculty based on demonstrated financial need and satisfactory academic performance. Preference will be given to students who contribute to the university or to the community through volunteer activities.

Dr. Rosena Davison Bursary for France Field School
Program code: ueb0-742
Value: $1000
Awarded: summer
Terms of reference: To an undergraduate student in any faculty based on demonstrated financial need and satisfactory academic standing. Preference will be given to students entering from Secondary School. Applicants must demonstrate financial need and have satisfactory academic standing. Other bursaries valued approximately at one term’s tuition are available to students in any faculty, who have a minimum of 60 credit hours at Simon Fraser University, have maintained satisfactory academic standing and are in financial need. A Bursary Endowment Fund has been established in honor of Father Della-Torre for his 27 years of pastoral at the Sacred Heart Church, Vancouver. This fund will provide annual bursaries in perpetuity from the earned income.

Gordon R. Diamond Bursary
Program code: UEB0-535
Value: $1000
Awarded: summer
Terms of reference: To undergraduate students in any faculty on the basis of demonstrated financial need and good academic standing.

Dr. Jack Diamond Bursary
Program code: UEB0-615
Value: $1000
Awarded: summer
Terms of reference: Bursaries are available to students in any faculty with satisfactory academic performance and demonstrated financial need.

Helen Egi Bursary for Students with Dependents
Program code: UEB0-739
Value: $250
Awarded: fall, spring, summer
Terms of reference: Bursaries will be awarded to students in any faculty on the basis of demonstrated financial need and satisfactory academic performance to students who financially support dependents.
UNDERGRADUATE

Erm Fiorillo – Hal Davis CKNW Orphan’s Fund Bursary
Program code: UEBO-651
Value: $3000
Awarded: fall
Terms of reference: To an entering student from a secondary school in the Vancouver School District. In future the bursary may be offered to students graduating from secondary schools within the lower mainland. This award will be renewable for 4 academic years provided the recipient maintains a 2.00 grade point average and registers in 9 credit hours during the tenure of the award. This bursary is for a capable student whose family cannot provide financial assistance with the costs of post-secondary education because they are on welfare assistance. Students must be nominated by their secondary school Principals and all applications will be evaluated by a school district selection committee and the successful candidate will be recommended to the Simon Fraser University Senate Undergraduate Awards Adjudication Committee.

Alex W. Fisher Bursary
Program code: UEBO-586
Value: $500
Awarded: spring
Terms of reference: To a hard-working and deserving male student in need of financial assistance. Donated by Alex W. Fisher.

Lois M. Fisher Bursary
Program code: UEBO-597
Value: $500
Awarded: spring
Terms of reference: To a hard-working and deserving female student in need of financial assistance. Donated by Mr. Alex W. Fisher.

William Gordon Memorial Bursary
Program code: UEBO-640
Value: $700
Awarded: fall
Terms of reference: To an undergraduate student in any Faculty. The student must have a satisfactory academic standing and demonstrate financial need.

Dr. Ben Gullison Bursary
Program code: UPBO-640
Value: $500
Awarded: fall
Terms of reference: To second, third or fourth year students in any undergraduate program. In recognition of Dr. Gullison's work, evidence of community service will be considered in making the award.

Hamber Foundation Bursary
Program code: UPBO-559
Value: $1000
Awarded: fall
Terms of reference: To women students with satisfactory academic standing and need for financial assistance.

Madge Hogarth Bursaries
Program code: UEBO-674
Value: $500
Awarded: fall
Terms of reference: To undergraduate students in any faculty who are entering or in their fourth year of study and who have maintained satisfactory academic standing and demonstrated financial need.

Horne Family Alumni Bursary
Program code: UEBO-657
Value: $1000
Awarded: fall, spring
Terms of reference: To a third or fourth year student who is a single parent, pursuing a degree at Simon Fraser University. The bursary is also based on satisfactory academic performance and demonstrated financial need.

IODE Evelyn Price Memorial Bursary
Program code: UEBO-641
Value: $700
Awarded: fall
Terms of reference: To undergraduate students who are in the final year of a degree program. Applicants must be Canadian citizens, be maintaining a satisfactory academic standing and be in financial need.

Ken and Su Jang Entrance Bursary
Program code: UEBO-672
Value: $1500
Awarded: fall
Terms of reference: To an entering student who demonstrates financial need and who has a satisfactory academic record prior to entrance to Simon Fraser University.

Blayne and Sharon Johnson Bursary
Program code: UEBO-523
Value: $1100
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance.

Charles Chan Kent Golden Wedding Bursaries
Program code: UPBO-563
Value: $500
Awarded: fall
Terms of reference: To a student who is proceeding to a degree in any field, has successfully completed at least one year at Simon Fraser University, and needs financial assistance. Preferably the bursary will be made to a student of Chinese descent.

Harold Lauer B’nai Brith (Lions Gate Lodge 1716) Bursary
Program code: UPBO-564
Value: $750
Awarded: fall
Terms of reference: To undergraduate students, in any faculty, who have determined financial need and satisfactory academic standing.

Donna Margaret Laws Undergraduate Bursary
Program code: UEBO-546
Value: $1000
Awarded: fall
Terms of reference: The Bursary will be given in the fall term to an undergraduate student in any faculty who is from outside the boundaries of the GVRD. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance. Preference, when possible, will be given to female students.

Dorothy and Alex MacDonald Bursary
Program code: UEBO-678
Value: $1000
Awarded: fall
Terms of reference: One or more bursaries will be awarded to undergraduate students in any faculty who have a satisfactory academic record and demonstrates financial need. A short letter outlining dedication to and involvement in the community should accompany the application.

Horne Family Alumni Bursary
Program code: UEBO-657
Value: $1000
Awarded: fall, spring
Terms of reference: To students who are returning to full-time studies subsequent to a substantial interruption of their academic career after secondary school. Students must have a satisfactory academic standing and demonstrate financial need.

Dr. Carol Matusicky Family Studies Bursary
Program code: UEBO-708
Value: $450
Awarded: spring
Terms of reference: The bursary is given on the basis of demonstrated financial need and satisfactory academic performance. Preference will be given to a student in the Certificate in Family Studies program or, failing that, to a student in any faculty whose course work will prepare them to work with children, youth and families after university.

John Michael McLarty Bursary
Program code: UEBO-666
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in any faculty. The award will be granted to a student who has a satisfactory academic record and who is experiencing financial need in the continuing pursuit of studies. Preference will be given to Canadian students.

Jo-Ann Mychaluk Bursary
Program code: UEBO-602
Value: $750
Awarded: fall
Terms of reference: To students with satisfactory academic standing. These bursaries are available to students who are or have been residents of the Chilcotin or Cariboo regions of BC. This fund has been established in memory of Jo-Ann Mychaluk who worked in the Centre for Distance Education.

Madeleine Nelson/Megan Thomas Bursary
Program code: UEBO-735
Value: $300
Awarded: spring
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance. Preference will be given to mature female students beginning or returning to University.

Nikitan/Chan Bursary
Program code: UEBO-737
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The bursary will substantially pay tuition and fees for two semesters and will be disbursed over two semesters. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in any faculty or discipline. The recipient will be a single parent with preference given to entering students.

Evelyn J. Oliver Bursary
Program code: UEBO-682
Value: $500
Awarded: fall, spring
Terms of reference: To undergraduate students who are single parents. Bursaries will be granted to students holding satisfactory academic records and providing evidence of financial need in the continuing pursuit of their undergraduate studies.

Opismath Club Bursary
Program code: UEBO-663
Value: $750
Awarded: fall
Terms of reference: For mature, continuing students at Simon Fraser University, who have financial need and good academic standing. The Opismath Club is an organization of senior (60 years) students.

Stephen Palmu Memorial Bursary
Program code: UPBO-566
Value: $100
Awarded: fall, spring
Terms of reference: To an entering student who has a satisfactory academic record prior to entrance to Simon Fraser University.
Terms of reference: The award will be given with initial preference to Native Indian students from anywhere in the Province of BC, who are pursuing courses of study leading to a Bachelor’s degree in any department at Simon Fraser University. The award will be made primarily on the basis of need, but in the case of several applicants having equal need, scholastic achievement shall be the deciding factor. Bursary established by Mrs. Mamie E Palmu.

Margaret Anne Paterson Bursary
Program code: UEBO-527
Value: $500
Awarded: fall
Terms of reference: To an undergraduate student in good academic standing studying in any faculty. Bursaries will be granted on the basis of demonstrated financial need. Preference will be given to an employee or direct family member of an employee of a Lower Mainland Boston Pizza restaurant or Boston Pizza International. A letter from the employer must be provided in order to support the employment claim. The Award will be made by the Senate Undergraduate Awards Adjudication Committee.

Permanent Bursary Endowment Plan
Program code: N/A
Value: $200
Awarded: fall, spring, summer
Terms of reference: Applications must be submitted on the Simon Fraser University bursary application form under the heading “Permanent Bursary Endowment Plan.” Permanent Bursary Endowments provide annual bursaries in perpetuity from the earned income, and have been established by the following: Belkin Packaging Limited Permanent Endowment Fund, Gretta Bowmer Memorial Estate, Estate of Hans Christiansen, Mark and Phae Collins Fund (Vancouver Foundation), Ted Cohen Dr. Jack Diamond Downs/Archambault Drop-in Centre Permanent Endowment Bursary, David A. Freeman Ellen Mary Greenaway John R. Hacht Stephen Hinchtcliff Memorial A. Koch (Bella Koch Memorial), Dr. W. Koerner I.L. Kostman Mrs. Katherine Leshgold Samuel D. Leshgold Dr. R.A. Palmer Mr. and Mrs. N.L. Rothstein M.M. Waterman In Memory of M.M. Waterman Ben Wosk Mr. and Mrs. Ben Wosk 40th Wedding Anniversary Office of the Registrar Bursary for Physically Challenged Students
Program code: UEBO-665
Value: $500
Awarded: fall
Terms of reference: To physically challenged undergraduate or graduate students in any faculty. The bursaries will be granted to physically challenged students holding satisfactory academic records and who are experiencing financial need in the pursuit of studies.

Rotary Club of Vancouver Sunrise Entrance Bursary
Program code: UEBO-706
Value: $1000
Awarded: fall
Terms of reference: Based on financial need, to a student entering Simon Fraser University. Preference will be given to a student who resides in the City of Vancouver. The recipient of the award may be invited to make a presentation at a meeting of the Rotary Club of Vancouver Sunrise.

Saskexpo '86 Bursary
Program code: UPBO-636
Value: $3000
Awarded: fall
Terms of reference: Saskatchewan secondary school student entering either Simon Fraser University in British Columbia or The University of Saskatchewan at Saskatoon in Saskatchewan. The award will alternate between Simon Fraser University and the University of Saskatchewan. For 1988-1989 (the first year of the award), the bursary was for a student attending Simon Fraser University. Selection will be made on the basis of financial need, the student’s demonstrated contribution to his/her school and community, and leadership potential. Consideration may also be given to the student's academic record. Applications will be submitted to the Simon Fraser University Senate Scholarships, Awards and Bursaries Committee, in care of the Director of Financial Aid and Awards at Simon Fraser University for students who plan to attend Simon Fraser University, and to the University of Saskatchewan Scholarships, Awards and Bursaries Committee, in care of the Registrar, for students planning to attend The University of Saskatchewan.

William and Jane Saywell Bursary
Program code: UPBO-682
Value: $1500
Awarded: fall
Terms of reference: To a student who is a single parent and has demonstrated a deep commitment to any field of study at Simon Fraser University and has financial need. A letter that outlines and discusses their extracurricular activities and interests that would demonstrate commitment to the chosen field of study must be included.

Sceptre Investment Counsel Administrative/Union Pension Plan Bursary
Program code: UEBO-721
Value: $1500
Awarded: fall
Terms of reference: Granted to a student in any faculty on the basis of demonstrated financial need and satisfactory academic performance.

Sceptre Investment Counsel Ltd Bursary
Program code: UEBO-701
Value: $2000
Awarded: fall
Terms of reference: To an entering undergraduate student in the Faculty of Science beginning in the 1995 fall term on a rotational basis in subsequent years to the faculties of Applied Sciences (1996), Arts (1997), Business Administration (1998), and Education (1999). The bursary will be awarded on the basis of demonstrated financial need and satisfactory academic performance.

Mrs. Rosalie Segal Endowment Fund for Students With Special Needs
Program code: UEBO-604
Value: $500
Awarded: fall, spring, summer
Terms of reference: This fund has been established to provide bursaries to physically challenged students. Up to 3 bursaries will be awarded on the basis of financial need. Adjudication will occur in consultation with the Physically Challenged Students’ Co-ordinator.

Stanley Sievenpiper Bursary
Program code: UEBO-605
Value: $500
Awarded: fall, spring
Terms of reference: One award in the fall and one in the spring on the basis of financial need. Preference will be given to third and fourth year students. This fund has been established in memory of Stanley Sievenpiper.

Simon Fraser Student Society UCB Pub Bursaries
Program code: UPBO-571
Value: $800
Awarded: spring
Terms of reference: To students with special or emergency financial need with preference to those students who may not otherwise be able to attend Simon Fraser University. Applications are open to part or full time, beginning or continuing students as well as international students.

Simon Fraser University 10th Anniversary Endowment Bursary
Program code: UEBO-504
Value: $500
Awarded: fall, spring, summer
Terms of reference: This fund has been established to provide bursaries for students in financial need who maintain a CGPA of 2.00.

Simon Fraser University Bursary Endowment Fund
Program code: UEBO-502
Value: $500
Awarded: fall, spring, summer
Terms of reference: To undergraduates in financial need are eligible to apply for these bursaries. A minimum CGPA of 2.00 is required.

Simon Fraser University Daycare Bursaries
Program code: UEUB-700
Value: $100
Awarded: fall, spring, summer
Terms of reference: Applications for daycare bursaries are available at the Daycare Centre. Eligible students may qualify for a bursary provided that financial need can be demonstrated by a completed Canada Student Loan assessment or an Open Bursary assessment. Daycare bursaries are available to both graduate and undergraduate students.

SFU Field School Bursary
Program code: UEUB-510
Value: $250
Awarded: fall, spring, summer
Terms of reference: Bursaries will be available each term to Simon Fraser University students who are participating in a SFU Field School. Awards will be made to students in good academic standing on the basis of demonstrated financial need.

SFU Foreign Exchange Bursary
Program code: UEUB-512
Value: $250
Awarded: fall, spring, summer
Terms of reference: Bursaries will be available each term to Simon Fraser University students who are participating in Formal Exchange programs organized by SFU. Awards will be made to students in good academic standing on the basis of demonstrated financial need.

SFU International Co-operative Education Bursary
Program code: UEUB-514
Value: $250
Awarded: fall, spring, summer
Terms of reference: Bursaries will be granted in any term to students in good academic standing who are accepted to the Co-operative Education Program and are enrolled in a work term outside of Canada. To be eligible students must be placed with a Co-operative Education employer and be in good standing with the Co-op program. The award will be made on the basis of demonstrated financial need.

SFU International Students’ Bursary Fund
Program code: UEUB-600
Value: $500
Awarded: fall, spring, summer
Terms of reference: This fund has been established to assist undergraduate visa students who have critical financial need. Students applying for this bursary must be registered in a minimum of 9 credit hours and have satisfactory academic standing.

Simon Fraser University International Students' Emergency Assistance Fund
Program code: UPBO-637
Value: $800
Awarded: fall, spring, summer
Terms of reference: This fund has been established primarily to assist undergraduate visa students who have critical financial need. Students applying for this bursary must be registered in a minimum of 9 credit hours and have satisfactory academic standing.

Simon Fraser University Open Bursaries
Program code: UUBO-500
Value: $500
Awarded: fall, spring, summer
Terms of reference: Must be registered in a minimum of 9 credit hours and have satisfactory academic standing.

SFU Punjabi Students Association Bursary
Program code: UEBO-521
Value: $450
Awarded: summer
Terms of reference: The SFU Punjabi Students Association Bursary valued at a portion of the income earned on the endowment, will be awarded annually in any term. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in any faculty.

Jennifer Allen Simons Bursary
Program code: UEBO-669
Value: $1000
Awarded: fall, spring
Terms of reference: To an undergraduate or graduate woman student in any faculty. The bursary will be granted to a student who is a single parent supporting a child, and who is in financial need and who has satisfactory academic performance. Applicants must have completed one term at Simon Fraser University as a full-time student.

B and B Sivertz Bursary
Program code: UEBO-656
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students who demonstrate financial need and satisfactory academic performance, and who have completed 30 credit hours at Simon Fraser University.

Harry and Dora Annie Smee Bursary
Program code: UEBO-606
Value: $800
Awarded: fall
Terms of reference: Up to 3 bursaries will be awarded to students in any faculty who have completed at least 30 credit hours at Simon Fraser University. The awards will be based on financial need and satisfactory academic standing. Preference will be given to female students.

Merle L. Smith Bursary
Program code: UPBO-572
Value: $525
Awarded: fall, spring
Terms of reference: A physically challenged student in any faculty who is beyond first year studies. Initial preference will be given to wheelchair users.

Squamish Nation Bursary
Program code: UEBO-738
Value: $500
Awarded: fall, spring, summer
Terms of reference: The bursary, based on financial need and community service, is granted to a student who is a member of the Squamish Nation. The bursary may be granted to graduate or undergraduate students in all disciplines. The successful student will have completed a minimum of 24 credits and will have achieved a minimum CGPA of 2.00. The application should include a discussion of the student's involvement in SFU or Squamish Nation community activities and confirmation of the student's status with the Squamish Nation.

Dorothy Sullivan Bursary
Program code: UEBO-690
Value: $800
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student in any Faculty who has been a Federal or Provincial prisoner. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

TCG International Undergraduate Bursaries
Program code: UEBO-644
Value: $1200
Awarded: fall
Terms of reference: The bursaries will be granted to undergraduate students in any faculty with satisfactory academic standing and experiences financial need in the continuing pursuit of their studies. Preference for one of the bursaries will be given to applicants who are sons, daughters, or legal dependants of employees of TCG International Inc. However, where no such candidate is identified, the disbursement of the awards will be at the discretion of Simon Fraser University.

Trident Enrichment Society Bursary
Program code: UEBO-696
Value: $600
Awarded: fall
Terms of reference: To an entering or first year undergraduate student in any faculty. The bursary will be awarded to a student with a satisfactory academic record and demonstrated financial need in the continuing pursuit of their studies. The application must be accompanied by a letter outlining the participant's participation in community service.

Catherine Tse Bursary For Simon Fraser University Field Schools
Program code: UPBO-696
Value: $300
Awarded: fall, spring, summer
Terms of reference: This bursary is for any Simon Fraser University student registered in a Simon Fraser University Field School who is experiencing financial need and demonstrating satisfactory academic performance. In lieu of a thank-you letter, the donor requests the student recipient send a postcard from the field school location.

TSSU Member Child Care Bursary
Program code: UUBO-580
Value: $500
Awarded: fall, spring, summer
Terms of reference: TSSU employees are eligible to apply to the TSSU Member Child Care Bursary for each term in which they hold an appointment and are registered as students at SFU and in which they receive child care services from a paid child care provider. All applications are subject to verification. The applicant must identify him/herself as an employee in the bargaining unit on the bursary application.

University Women's Club of Vancouver Bursary
Program code: UPBO-575
Value: $985
Awarded: spring
Terms of reference: To a female student in any faculty enrolled in any program of study leading to a degree.

The basis of the award is demonstration of financial need and satisfactory academic standing.

Vancouver East Rotary Entrance Bursary
Program code: UEBO-743
Value: $250
Awarded: fall
Terms of reference: The Bursary will be awarded on the basis of financial need to a student entering Simon Fraser University. Preference will be given to a student graduating from Killarney, Windermere or Gladstone Secondary Schools in Vancouver entering an undergraduate program showing interest in pursuing a career in K-12 education. If no suitable candidates are identified the bursary will be made available to students, from Killarney, Windermere or Gladstone Secondary Schools in Vancouver entering any undergraduate program at Simon Fraser University. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Vancouver Foundation First Nations Bursary
Program code: UPBO-697
Value: $500
Awarded: fall
Terms of reference: Bursaries will be available annually in the fall term to undergraduate or graduate Aboriginal students (First Nations, status or non-status, Metis or Inuit) who permanently reside in British Columbia. Awards will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Roger Ward and Avora Hamilton Award for Students With a Learning Disability
Program code: UEBO-736
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a full time undergraduate student(s) with a learning disability who is registered for services at the Centre for Students with Disabilities and is experiencing financial need. The award will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Western Businesswomen's Association Bursary
Program code: UEBO-705
Value: $800
Awarded: fall
Terms of reference: To a full or part-time student who is returning after an absence. Preference will be given to a mature female student. The bursary will be based on satisfactory academic performance and demonstrated financial need.

Morris J. and Dena Wosk Bursary
Program code: UEBO-712
Value: $1000
Awarded: spring
Terms of reference: To undergraduate students in any faculty, on the basis of demonstrated financial need and satisfactory academic performance.

Fred & Maureen Wright Bursary
Program code: UEBO-710
Value: $1000
Awarded: spring
Terms of reference: To undergraduate students in any faculty on the basis of demonstrated financial need and satisfactory academic performance.

John and Isabel Young Bursary
Program code: UEBO-705
Value: $1000
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance.
Bursaries for Applied Sciences Students

Canadian Federation of University Women - North Vancouver Bursary
Program code: UPBO-574
Value: $1000
Awarded: spring
Terms of reference: To a female undergraduate student enrolled in the 2nd, 3rd, or 4th year in any math or science Faculty or Professional School. The recipient should be in financial need and in satisfactory academic standing. The recipient must be a resident of North Vancouver or a graduate of a North Vancouver Secondary School (School District #44).

Hugh Clark Memorial Bursary in Engineering Science
Program code: UEOB-694
Value: $600
Awarded: fall
Terms of reference: To an undergraduate student in the School of Engineering Science. The award will be granted to a student holding a satisfactory academic record and exhibiting a continuing pursuit of his/her studies.

Delcan Corporation Bursaries
Program code: UEOB-667
Value: $1000
Awarded: spring
Terms of reference: To undergraduate and graduate students registered full time in the faculties of Science or Applied Sciences. It is the intention of the Delcan Corporation to promote socio-environmental research and studies relative to major civil engineering projects; to support opportunities for women to enter careers at the management level in engineering; to increase high technological input into civil engineering, and to promote superior written and oral communication skills. Students will apply for these bursaries through Financial Aid and Awards, and must include a letter of recommendation from the Office of the Dean of the major program.

Engineers' Wives' Association Bursary
Program code: UEOB-525
Value: $500
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in the School of Engineering Science. The applicant should be a Canadian citizen or a permanent resident of Canada.

Alec and Arthur Fouis Bursary in Publishing Studies
Program code: UEOB-526
Value: $1000
Awarded: fall
Terms of reference: One or more bursaries will be awarded annually in the fall term to a student enrolled in a degree program in Publishing Studies. Students must have a minimum of 85 credit hours. The successful applicant should have financial need, a satisfactory academic standing and a demonstrable intent to pursue a career in the publishing industry. Applicants must submit to the Publishing Studies Program Committee a resume, including education and work history, and at least one short sample of professional, academic or business writing or portfolio piece to be considered for the award.

IODE Burnaby Municipal Chapter Bursary
Program code: UEOB-658
Value: $750
Awarded: fall, spring
Terms of reference: To third or fourth year students majoring in Science or Applied Sciences. Students must be Canadian citizens and graduates of Burnaby Senior Secondary School. Financial need and satisfactory academic standing is required.

JimMar Bursary in Engineering Science
Program code: UEOB-538
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted to undergraduate students in the Faculty of Applied Sciences majoring in Engineering. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.

Ralph Kerr Memorial Bursary
Program code: UEOB-599
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students. Preference will be given to students who are in their third or fourth year of studies in the Physics or Engineering Programs. This bursary fund has been established in memory of Ralph Kerr, a charter member of Simon Fraser University and a former employee of the Physics Department.

Tom Mallinson Bursary in Communication
Program code: UEOB-518
Value: $1000
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in the School of Communication with a shown interest in the field of interpersonal communication.

Kinder Morgan Canada Bursary in Science or Applied Sciences
Program code: UEOB-709
Value: $1000
Awarded: spring
To students who have approved majors in the Faculty of Science or Faculty of Applied Sciences based on demonstrated financial need and satisfactory academic performance to students.

School of Kinesiology Alumni Bursaries
Program code: UESO-532
Value: $500
Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the School of Kinesiology.

Olga and Richard Murray Bursary in Applied Sciences
Program code: UEOB-725
Value: $1000
Awarded: fall, spring, summer
Terms of reference: Granted to graduate or undergraduate students in the Applied Sciences Faculty on the basis of demonstrated financial need and satisfactory academic performance. To the extent feasible, preference will be given to a student, or the spouse or child of a person, who is a member of the Telecommunication Workers Union or of Van-Tel Credit Union.

Pacific National Foundation Endowment Bursary
Program code: UEOB-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and demonstrate financial need. A letter expressing job goals and direction should accompany the application form.

Kazuya Shinyaishi Memorial Bursary in Computing Science
Program code: UEOB-515
Value: $1000
Awarded: summer
Terms of reference: To an undergraduate student in computing science with financial need.

Sierra Systems Bursary in Computing Science
Program code: UEOB-663
Value: $2500
Awarded: fall
Terms of reference: To third or fourth year students in the School of Computing Science. Applicants must have a satisfactory academic standing and financial need. One award will be given to a student from the Greater Vancouver Regional District and the other to a student from outside the Greater Vancouver Regional District.

Victor J. Sundberg Memorial Bursary in Engineering Science
Program code: UEOB-881
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in any faculty. Whenever possible, preference will be given to a student majoring in Engineering Science in the Faculty of Applied Science. Applicants must have a satisfactory academic record and be in financial need in the pursuit of their academic studies. As well, special consideration will be given to community involvement and citizenship, evidence thereof to be provided in an accompanying letter or supporting documentation.

Irene May Surbery Bursary
Program code: UEOB-723
Value: $900
Awarded: spring
Terms of reference: Granted to undergraduate students in the Faculty of Science or in the Faculty of Applied Sciences. The bursary is granted on the basis of demonstrated financial need and satisfactory academic performance.

Bursaries for Arts and Social Sciences Students

B.C. Shopping Centre Association Bursary
Program code: UPBO-604
Value: $1000
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to an undergraduate student of the Certificate in Urban Studies.

BOMA Undergraduate Bursary in Urban Studies
Program code: UEOB-715
Value: $1000
Awarded: fall, spring
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to a student in the Certificate in Urban Studies program, or failing that, to a student in any faculty whose course work involves some aspect of real estate studies as their primary focus.

Gloria Garrett Carlson Bursary in Dance
Program code: UEOB-522
Value: $900
Awarded: fall, spring, summer
Terms of reference: The Gloria Garrett Carlson Bursary in Dance valued at a portion of the income earned on the endowment will be awarded annually in any term. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students majoring in Dance.
THE UNIVERSITY OF BRITISH COLUMBIA

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majors in Dance in the School of Contemporary Arts.

**Chien's Cultural Foundation Bursary**
Program code: UEBO-707
Value: $650
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration, or in the Faculty of Arts, preferably in Political Science. The Bursary will be given to a student in good academic standing who is experiencing financial need.

**Adaline May Clark Bursary**
Program code: UEBO-590
Value: $400
Awarded: fall
Terms of reference: The late Mrs. Clark has provided for the endowment of funds, for bursaries to enable students to attend, or continue to attend university. Students must be registered in the School for the Contemporary Arts, and must demonstrate financial need and a high level of achievement in the Arts.

**Dr. Ed Colhoun Memorial Bursary**
Program code: UEBO-673
Value: $225
Awarded: fall
Terms of reference: To an undergraduate student in Spanish who is holding a satisfactory academic record and who demonstrates financial need.

**Kenneth Conibear Bursary in English**
Program code: UEBO-724
Value: $500
Awarded: fall, spring, summer
Terms of reference: Granted to undergraduate students majoring in English. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.

**School for the Contemporary Arts Alumni Bursaries**
Program code: UEBO-529
Value: $500
Awarded: Summer
Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the School for the Contemporary Arts.

**Laurence Mervyn Cox Bursary in English**
Program code: UEBO-541
Value: $500
Awarded: fall, spring, summer
Terms of reference: Awarded on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students majoring in English. Preference will be given to students accepted to the honors program in the Department of English and to Canadian citizens or permanent residents of Canada.

**School of Criminology Alumni Bursaries**
Program code: UEBO-530
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the School of Criminology.

**CUPE LOCAL 3338 Bursary In Labour Studies**
Program code: UPBO-703
Value: $500
Awarded: fall, spring, summer
Terms of reference: Bursaries are offered based on demonstrated financial need and satisfactory academic performance to students who are approved in the Labour Studies certificate or minor program at SFU.

**Charles Drugan & Rose Anne Doonan Bursary in Labour History**
Program code: UEBO-542
Value: $250
Awarded: fall, spring, summer
Terms of reference: The bursary will be granted to a graduate or undergraduate student pursuing research in Labour History in the Faculty of Arts. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

**English Faculty Honours Bursary**
Program code: UEBO-730
Value: $500
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance, to an undergraduate student in the honours English program. If there is no suitable candidate from the honours English program in a given year, the bursary may be awarded to an undergraduate student majoring in English.

**Murray Farr Bursary in Performing Arts**
Program code: UEBO-679
Value: $1000
Awarded: spring
Terms of reference: To an undergraduate student in the School for the Contemporary Arts with a performing arts concentration.

**Aird Dundas Flavelle Memorial Bursary**
Program code: UEBO-659
Value: $1200
Awarded: fall
Terms of reference: To a student who has completed at least 15 hours at Simon Fraser with a satisfactory academic standing and whose course of study is in the following areas: political science, economics, and/or business administration.

**Robtin Hoodspith Memorial Bursary in English**
Program code: UPBO-609
Value: $500
Awarded: spring
Terms of reference: To an undergraduate student with an approved English major who is experiencing financial need.

**Patsy Hui Annual Bursary in Fine Arts**
Program code: UPBO-710
Value: $1000
To an undergraduate student in their third year of study in the Bachelor of Fine Arts Degree program in any term in good academic standing and based on financial need. Students may be pursuing a dance, film, music, theatre or visual arts major.

**IATSE-Motion Picture Technicians Union Local 891 Bursary**
Program code: UPBO-694
Value: $2000
Awarded: summer
Terms of reference: Granted to full-time undergraduate students in the School for Contemporary Arts majoring in film or theatre. The bursary is granted in any term based on demonstrated need and satisfactory academic performance.

**ICBC/Brian Jones Memorial Bursary in Criminology**
Program code: UEBO-524
Value: $750
Awarded: summer
Terms of reference: Granted to undergraduate students in the School of Criminology.

**IOCE Verna Allen Memorial Bursary**
Program code: UPBO-561
Value: $275
Awarded: spring
Terms of reference: To an undergraduate student in second or third year within the Faculty of Arts. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance. The recipient may be a Canadian citizen or permanent resident of Canada.

**Grace Woodsworth MacInnis Bursary in Political Science**
Program code: UEBO-702
Value: $700
Awarded: fall
Terms of reference: To an undergraduate student majoring in Political Science. Preference will be given to students in the Faculty of Arts and Social Sciences.

**Keith Gilbert Loughlin Bursary in Gerontology**
Program code: UEBO-704
Value: $700
Awarded: fall
Terms of reference: To a graduate student enrolled in the Masters of Gerontology program, or to an undergraduate student enrolled in the Gerontology program, a Post Baccalaureate Diploma Program. The bursary will be granted to a student demonstrating financial need and in satisfactory academic standing. Preference will be given to a student specializing in quality of life issues in intermediate care facilities for seniors. Applicants should submit with their application, a letter outlining specialization or area of interest in the Gerontology field. A departmental nomination is to be submitted along with the application form.

**MATCH International Centre Bursaries in Honour of Rosemary Brown**
Program code: UPBO-607
Value: $625
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance. The recipient may be a Canadian citizen or permanent resident of Canada with preference given to individuals who have prior schooling (or partially educated) in Canada.
academic performance to full-time undergraduate or graduate students in the Department of Women's Studies.

McCaubey Family Bursary in Criminology
Program code: UEBO-691
Value: $600
Awarded: fall
Terms of reference: To undergraduate students in Criminology who are single parents. Preference will be given to applicants who are sons, daughters or legal dependents of members of the Firemen's Benefit Association of Vancouver, BC, however, where no such candidate is identified, the award may be disbursed to other eligible students. The bursary will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Lydia McCombie Memorial Bursary
Program code: UEBO-693
Value: $1200
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Arts majoring in English. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Bruce McKelvie Endowment Bursary
Program code: UEBO-601
Value: $400
Awarded: fall, spring
Terms of reference: To a student on the basis of financial need and satisfactory academic standing. To qualify students must have completed at least two years of study at Simon Fraser University and be focusing their studies on early BC history, namely 18th century forward. The bursary has been established by the Native Sons of British Columbia, Post #2.

Robin Mercer Memorial Bursary in Archaeology
Program code: UEBO-675
Value: $700
Awarded: fall
Terms of reference: To an undergraduate student who is majoring in Archaeology and who has a satisfactory academic record and in financial need. This bursary was established in memory of Robin Mercer, a former alumnus of Simon Fraser University in the Faculty of Arts.

Dr. Grazia Merler Bursary in French
Program code: UEBO-714
Value: $500
Awarded: spring
Terms of reference: To a student in French on the basis of demonstrated financial need and satisfactory academic performance.

Margaret A. Mitchell Bursary in Political Science
Program code: UEBO-687
Value: $2500
Awarded: fall
Terms of reference: To an undergraduate female student in second, third or fourth year of studies who is majoring in Political Science. The award will be granted to a student holding a satisfactory academic record and demonstrated financial need. When possible, preference will be given to a candidate living in the east end of Vancouver or in Burnaby.

Margaret A. Mitchell Bursary in Women's Studies
Program code: UEBO-688
Value: $2500
Awarded: fall
Terms of reference: To an undergraduate female student in second, third or fourth year who is majoring in Women's Studies. The award will be granted to a student holding a satisfactory academic record and demonstrated financial need. When possible, preference will be given to a candidate living in the east end of Vancouver or in Burnaby.

Kelly O'Hagan Memorial Bursary
Program code: UEBO-683
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student enrolled in the Latin American Studies Field School. One or more bursaries will be awarded biennially on the basis of financial need and satisfactory academic standing. Departmental nomination/recommendation is required.

Dr. Margaret Ormsby Bursary in History
Program code: UEBO-719
Value: $850
Awarded: fall
Terms of reference: Granted to undergraduate students in the Department of History based on demonstrated financial need and satisfactory academic performance.

Rosslyn and Mary Penney Bursary in the Faculty of Arts
Program code: UEBO-700
Value: $500
Awarded: spring
Terms of reference: Awarded to an undergraduate student in the Faculty of Arts in their second, third or fourth year of study. The bursary will be granted to a student who is physically challenged. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Helen Pitt Bursary in Visual Arts
Program code: UPBO-567
Value: $500
Awarded: fall
Terms of reference: The Helen Pitt Bursary in Visual Arts will be awarded based on satisfactory academic standing and demonstrated financial need to second, third or fourth year full-time undergraduate students in Visual Arts. Please note that students receiving the Secondary Scholarship are not eligible to receive a bursary from the funds as well.

Carla Poppen Annual Bursary
Program code: UPBO-706
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student(s) in Women's Studies on the basis of financial need and satisfactory academic standing. The Bursary will be made by the Senate Undergraduate Awards Adjudication Committee.

George and Muriel Rogers Bursary in the Faculty of Arts
Program code: UEBO-534
Value: $950
Awarded: summer
Terms of reference: To an entering or returning undergraduate student in the Faculty of Arts. Preference will be given to a female student who is continuing her education after an absence of several years. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Rogers Sugar Ltd. Bursaries
Program code: UPBO-553
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students, who are in their third or fourth year of study at Simon Fraser University. Two bursaries are available to students majoring in Business Administration, and three bursaries to students majoring in Economics, or the Sciences, including Mathematics and Statistics.

Donald H.M. Ross Faculty of Arts Bursary
Program code: UEBO-692
Value: $1000
Awarded: fall
Terms of reference: To a third or fourth year undergraduate student in the Faculty of Arts. The bursary will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Paul and Ethel Seifner Linguistics Bursaries
Program code: UEBO-661
Value: $1000
Awarded: fall, spring
Terms of reference: To undergraduate students pursuing a linguistics program who have satisfactory academic standing, demonstrated financial need, and have completed 15 credit hours at Simon Fraser.

Frederick Shen Bursaries in Business Administration and Economics
Program code: UPBO-704
Value: $500
Awarded: summer
Terms of reference: Bursaries will be available annually to students with an approved major in Business Administration or Economics, on the basis of demonstrated financial need and satisfactory academic performance.

Retail Loss Prevention Association of British Columbia/Deborah Singer Memorial Bursary
Program code: UPBO-605
Value: $1000
Awarded: summer
Terms of reference: To an undergraduate student in Criminology who is in satisfactory academic standing and demonstrates financial need.

Sodexo Bursaries
Program code: UPBO-602
Value: $500
Awarded: summer
Terms of reference: Awarded to full-time undergraduate students in the Faculty of Arts and Social Sciences. The bursaries are based on demonstrated financial need and satisfactory academic performance.

The University Annual Bursary in Community Planning
Program code: UPBO-707
Value: $500
Awarded: fall, spring, summer
Terms of reference: To an upper level geography student. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Bursaries for Business Administration Students
3M Canada Company Bursary in Business Administration
Program code: UPBO-601
Value: $1000
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in the Faculty of Business Administration.

BC Bond Dealers Association Bursary
Program code: UEBO-689
Value: $550
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration with a concentration in Finance. The bursary will be granted on the basis of demonstrated financial need and a satisfactory academic record.
Keith and Betty Beedie Foundation Bursary in Business Administration
Program code: UEOB-698
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate third or fourth year student in the Faculty of Business Administration with a concentration in either Finance or Accounting. Preference will be given to a graduate of either Burnaby secondary school or Magee Secondary School. The bursary will be granted on the basis of satisfactory academic performance.

Faculty of Business Administration Alumni Bursaries
Program code: UEOB-531
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Business Administration.

Chien's Cultural Foundation Bursary
Program code: UEOB-707
Value: $650
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration or in the Faculty of Arts, preferably in Political Science. The Bursary will be given to a student in good academic standing who is experiencing financial need.

Connor, Clark & Lunn Bursary
Program code: UPBO-684
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration with a concentration in International Business who is in good academic standing and experiencing financial need.

Maurice S. Dodge Bursary
Program code: UEOB-720
Value: $1250
Awarded: fall
Terms of reference: Given to a third or fourth year student majoring in Business Administration with an Accounting or Finance concentration. The bursary will be granted to a student in good academic standing.

A. John Ellis Bursary in Business Administration
Program code: UEOB-711
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To undergraduate students in the Faculty of Business Administration. The bursary will be awarded based on financial need and a satisfactory academic standing.

Executive Women International Bursary
Program code: UEOB-684
Value: $550
Awarded: fall
Terms of reference: To an undergraduate female student enrolled in the Faculty of Business Administration in the second, third or fourth year of studies and who has a satisfactory academic record and financial need.

Aird Dundas Flavelle Memorial Bursary
Program code: UEOB-659
Value: $1200
Awarded: fall
Terms of reference: To a student who has completed at least 15 hours at Simon Fraser with a satisfactory academic standing and whose course of study is in the following areas: political science, economics and/or business administration.

Chu On Fok and Wai Yuk Fok Foundation Bursary
Program code: UEOB-545
Value: $250
Awarded: summer
Terms of reference: The Bursary is granted in any term to a student in any year with an approved Business Administration major who is experiencing financial need and demonstrates satisfactory academic performance. Where possible, preference may be given to single parent students.

Henderson Development Ltd. Bursary
Program code: UPBO-688
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in third or fourth year in Business Administration. The bursary will be awarded to a student in satisfactory academic standing and demonstrated financial need.

Dr. Cal Hoyt Bursary in Business Administration
Program code: UEOB-722
Value: $500
Awarded: spring
Terms of reference: Granted to undergraduate students in the Faculty of Business Administration based on demonstrated financial need and satisfactory academic performance.

Ivanhoe Cambridge Bursary
Program code: UEOB-653
Value: $900
Awarded: fall
Terms of reference: To full-time undergraduate students enrolled in the Faculty of Business Administration. The awards are based on financial need and satisfactory academic standing.

R.J. McMaster Memorial Bursary (Credit Union Foundation of B.C.)
Program code: UEOB-634
Value: $500
Awarded: spring
Terms of reference: To a student majoring in Business Administration who is entering or in the final year of studies and, who has taken or will be enrolled in BUS 393, BUEC 391 or BUEC 495. The basis of the bursary will be financial need and good academic standing.

Pacific National Foundation Endowment Bursary
Program code: UEOB-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and a demonstrated financial need. A letter expressing job goals and direction should accompany the application form.

Rogers Sugar Ltd. Bursaries
Program code: UPBO-553
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students, who are in their third or fourth year of study at Simon Fraser University. Two bursaries are available to students majoring in Business Administration, and three bursaries to students majoring in Economics, or the Sciences, including Mathematics and Statistics.

Robert Rogow Bursary in Business Administration
Program code: UEOB-727
Value: $1000
Awarded: spring
Terms of reference: Granted to undergraduate students in the Faculty of Business Administration based on demonstrated financial need and satisfactory academic performance.

Seaspan International Bursary
Program code: UPBO-686
Value: $750
Awarded: fall
Terms of reference: To a student, approved as a major, in Business Administration, who has satisfactory academic standing and financial need.

Frederick Shen Bursaries in Business Administration and Economics
Program code: UPBO-704
Value: $500
Awarded: summer
Terms of reference: Bursaries will be available annually to students with an approved major in Business Administration or Economics, on the basis of demonstrated financial need and satisfactory academic performance.

Vancouver Executives Association Bursary in Business Administration
Program code: UEOB-598
Value: $1500
Awarded: fall
Terms of reference: To a full-time, undergraduate student in Business Administration. The bursary will be granted on the basis of demonstrated financial need and satisfactory academic standing.

Charles S. Walker Bursary
Program code: UEOB-731
Value: $500
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Business Administration with a concentration in marketing.

Bruce and Lis Welch Bursary in Business Administration
Program code: UEOB-717
Value: $1200
Awarded: summer
Terms of reference: Granted to undergraduate students in the Faculty of Business Administration based on demonstrated financial need and satisfactory performance.

Bing Sum Yip Bursary In Business Administration
Program code: UEOB-686
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate student in the Faculty of Business Administration. The award will be granted to a student with a satisfactory academic record and demonstrated financial need.

Elizabeth Young Memorial Bursary
Program code: UEOB-695
Value: $500
Awarded: fall
Terms of reference: One or more bursaries will be awarded to undergraduate female students in Business Administration who demonstrate satisfactory academic achievement and financial need.

Bursaries for Education Students
University Women's Club of Vancouver/Jean Beatty Memorial Bursary in Education
Program code: UEOB-519
Value: $700
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to a mature student in the Faculty of Education.
May Bennett Bursary
Program code: UEOB-585
Value: $150
Awarded: fall
Terms of reference: To undergraduate students in the Faculty of Education. Applicants should be prepared to teach in British Columbia and demonstrate dedication to the teaching profession.

Canadian Yugoslav Community Association
Undergraduate Bursary in Education
Program code: UEOB-703
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate third or fourth year student in the Faculty of Education. The bursary will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Delta Kappa Gamma Society - Delta Chapter Bursary
Program code: UEOB-533
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Education.

Faculty of Education Alumni Bursaries
Program code: UEOB-595
Value: $1000
Awarded: fall, spring
Terms of reference: To a student enrolled in the Professional Development Program who is also enrolled in a minor in Learning Disabilities, and who is entering EDUC 405 in either spring or fall term. The bursary is awarded for the term in which EDUC 405 is undertaken.

Polly Evenden Bursary in Geography Education
Program code: UEOB-544
Value: $250
Awarded: fall, spring, summer
Terms of reference: The bursary will be granted on the basis of demonstrated need and satisfactory academic performance to a student who has completed a bachelor's degree from Simon Fraser University with an honors or major in Geography or who is approved in such a program and is entering the Professional Development Program. Applicants must be intending to teach Geography upon graduation and provide a supporting letter outlining their career goals and this intent.

JimMar Bursary in Education
Program code: UEOB-539
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted to undergraduate students in the Faculty of Education majoring in Engineering. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.

Pacific National Foundation Endowment Bursary
Program code: UEOB-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and a demonstrated financial need. A letter expressing job goals and direction should accompany the application form.

Maureen Pollard Memorial Bursary
Program code: UEOB-754
Value: $750
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Professional Development Program in the Faculty of Education. Preference, when possible, will be given to students in the Elementary stream.

Sylvia R.H. Rice Memorial Bursary
Program code: UEOB-660
Value: $1000
Awarded: fall
Terms of reference: To a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

VanCity Credit Union Bursary
Program code: UEOB-638
Value: $500
Awarded: fall, spring
Terms of reference: To a student in any year of the Bachelor of Education, or the Professional Development Program (PDP) on the basis of demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Vancouver Elementary School Teachers' Association Bursary
Program code: UEOB-577
Value: $600
Awarded: fall
Terms of reference: To students entering third year in the Faculty of Education at Simon Fraser University.

JimMar Bursary in Education
Program code: UEOB-539
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted to undergraduate students in the Faculty of Education majoring in Engineering. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.

Pacific National Foundation Endowment Bursary
Program code: UEOB-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and a demonstrated financial need. A letter expressing job goals and direction should accompany the application form.

Maureen Pollard Memorial Bursary
Program code: UEOB-754
Value: $750
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Professional Development Program in the Faculty of Education. Preference, when possible, will be given to students in the Elementary stream.

Sylvia R.H. Rice Memorial Bursary
Program code: UEOB-660
Value: $1000
Awarded: fall
Terms of reference: To a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

VanCity Credit Union Bursary
Program code: UEOB-638
Value: $500
Awarded: fall, spring
Terms of reference: To a student in any year of the Bachelor of Education, or the Professional Development Program (PDP) on the basis of demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Vancouver Elementary School Teachers' Association Bursary
Program code: UEOB-577
Value: $600
Awarded: fall
Terms of reference: To students entering third year in the Faculty of Education at Simon Fraser University.

JimMar Bursary in Education
Program code: UEOB-539
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted to undergraduate students in the Faculty of Education majoring in Engineering. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.

Pacific National Foundation Endowment Bursary
Program code: UEOB-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and a demonstrated financial need. A letter expressing job goals and direction should accompany the application form.

Maureen Pollard Memorial Bursary
Program code: UEOB-754
Value: $750
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Professional Development Program in the Faculty of Education. Preference, when possible, will be given to students in the Elementary stream.

Sylvia R.H. Rice Memorial Bursary
Program code: UEOB-660
Value: $1000
Awarded: fall
Terms of reference: To a student wishing to upgrade their professional skills. The student should have satisfactory academic standing and demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

VanCity Credit Union Bursary
Program code: UEOB-638
Value: $500
Awarded: fall, spring
Terms of reference: To a student in any year of the Bachelor of Education, or the Professional Development Program (PDP) on the basis of demonstrated financial need. The award will be made by the Senate Undergraduate Awards Adjudication Committee.

Vancouver Elementary School Teachers' Association Bursary
Program code: UEOB-577
Value: $600
Awarded: fall
Terms of reference: To students entering third year in the Faculty of Education at Simon Fraser University.

JimMar Bursary in Education
Program code: UEOB-539
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted to undergraduate students in the Faculty of Education majoring in Engineering. The bursary is granted in any term based on demonstrated financial need and satisfactory academic performance.
must include a letter of recommendation from the Office of the Dean of the major program.

Greater Vancouver Mining Women’s Association Bursary in Earth Sciences
Program code: UPBO-700
Value: $500
Awarded: fall
Terms of reference: One bursary is available to a female undergraduate student in third or fourth year who is pursuing an undergraduate degree with an approved major in Earth Sciences and who is experiencing financial need.

IOE Burnaby Municipal Chapter Bursary
Program code: UEBO-658
Value: $750
Awarded: fall, spring
Terms of reference: To third or fourth year students majoring in Science or Applied Sciences. Students must be Canadian citizens and graduates of Burnaby Senior Secondary School. Financial need and satisfactory academic standing is required.

Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Science.

Faculty of Science Alumni Bursaries
Program code: UEBO-528
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Science.

SFU Molecular Biology and Biochemistry Student Union Bursary
Program code: UPBO-608
Value: $100
Awarded: spring
Terms of reference: The bursary will be granted annually in the spring term to a student with an approved major in MBB. The bursary is based on financial need and satisfactory academic performance.

Irene May Surbey Bursary
Program code: UEBO-723
Value: $900
Awarded: spring
Terms of reference: Granted to undergraduate students in the Faculty of Science or in the Faculty of Applied Sciences. The bursary is granted on the basis of demonstrated financial need and satisfactory academic performance.

Ken Turner Memorial Endowment Fund Bursary
Program code: UEBO-639
Value: $1000
Awarded: fall, spring
Terms of reference: To third or fourth year undergraduate students with a specialization in Marine Biology. All students are welcome to apply. Preference will be given to a student from the Kimberly area if all other qualifications have been met. This bursary is in memory of Ken Turner, a graduate of the Resource Management Program. A departmental recommendation is also required.

Urea Formaldehyde Foam Insulation Association Bursary
Program code: UEBO-607
Value: $250
Awarded: fall, spring
Terms of reference: To students who have completed at least 60 credit hours and who are studying in the areas of toxic chemicals or pollutants and their effects on human health and functioning. Please document eligibility. The Endowment has been established by the Association.

Rogers Sugar Bursaries
Program code: UPBO-553
Value: $1000
Awarded: fall
Terms of reference: To undergraduate students who are in their third or fourth year of study at Simon Fraser University. Two bursaries are available to students majoring in Business Administration, and three bursaries to students majors in Economics, or the Sciences, including Mathematics and Statistics.

Jennifer O’Neill Memorial Annual Bursary in Marine Biology.
Terms of reference: Granted to a student in any Department of Biological Sciences who is in his/her 3rd or 4th year with a connection to their own aboriginal community and who have completed 30 credit hours at the University. The recipient will be in good academic standing and have demonstrated excellent academic performance in one or more courses in the areas of toxic chemicals or pollutants and their effects on human health and functioning. Please document eligibility. The Endowment has been established by the Association.

Ralph Kerr Memorial Bursary
Program code: UEBO-599
Value: $1000
Awarded: fall
Terms of reference: Preference will be given to students who are in their third or fourth year of studies in the Physics or Engineering Programs. This bursary fund has been established in memory of Ralph Kerr, a charter member of Simon Fraser University and a former employee of the Physics Department.

Kinder Morgan Canada Bursary in Science or Applied Sciences
Program code: UPBO-709
Value: $1000
Awarded: Spring
To students who have approved majors in the Faculty of Science or Faculty of Applied Sciences based on demonstrated financial need and satisfactory academic performance to students.

Margaret Lawson McTaggart-Cowan Alumni Bursary
Program code: UEBO-600
Value: $600
Awarded: fall
Terms of reference: To a female student who is majoring in Mathematics and who has completed at least two full-time semesters at Simon Fraser University.

Jennifer O’Neill Memorial Annual Bursary in Environmental Science
Program code: UPBO-705
Value: $500
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student in their third year of study in Environmental Science Program.

Oakley Family Endowed Bursary in Science Program code: UEBO-736
Value: $450
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Science.

Pacific National Foundation Endowment Bursary
Program code: UEBO-655
Value: $2000
Awarded: fall
Terms of reference: To a single parent, undergraduate student in the Faculty of Business Administration, Faculty of Education, Faculty of Applied Sciences or the Faculty of Science. The bursary will be granted to a student wishing to upgrade their professional skills.

The student should have satisfactory academic standing and a demonstrated financial need. A letter expressing job goals and direction should accompany the application form.

Regulations for Academic and Service Awards
The following regulations govern all prizes, medals or awards over which the University has jurisdiction.

• In most cases, nominations are submitted directly to Financial Aid and Awards. Both undergraduate and graduate students are eligible unless otherwise indicated.

• Undergraduate students must have achieved a minimum CGPA of 2.00 during the term of their contribution and must not be on academic probation, or in the case of first term or transfer students, must possess an equivalent secondary school or college standing.

• Undergraduates must be registered in a minimum of nine credit hours of normal course load in the term of eligibility. Challenge, audit, and credit free courses are not considered. Students who register in fewer than nine credit hours or subsequently drop below nine hours may have their awards cancelled.

• Graduate students must be registered for residence credit in an approved full time program in the term of eligibility. Students who do not register or subsequently change to on-leave status may have their awards cancelled.

• Candidates must submit an application form to Financial Aid and Awards or be nominated by a member (or members) of the Simon Fraser University faculty, staff, student body or alumni. Individuals submitting a nomination for an award must file the nomination form with Financial Aid and Awards.

• Normally, only one intervening term will be allowed between the term in which the registered student made their contributions and the term in which the award is adjudicated.

• Where contributions are over and above usual expectations, remunerated or assigned activities, such as course assignments or teaching duties, may be considered for recognition.

• Unless otherwise stated, awards are tenable only at Simon Fraser University for the term indicated on the notice and may not be deferred.

Awards for All Students
Aboriginal Student Leader Award
Program code: UUAO-120
Value: $2000
Awarded: fall, spring, summer
Terms of reference: Awards are given in recognition of distinguished intellectual, cultural, social or athletic contribution to university life. Awards usually consist of monetary remuneration but may come in the form of a prize or medal. Many of the following awards have been made possible by generous donations.
the achievements of the nominee, should be sent from the chair or director of the nominee's department or school to the Registrar by April 15 each year. The award will be made by the Senate Undergraduate Awards Adjudication Committee. Presentation of the Alumni Association Outstanding Student Leadership Award will take place at the annual Outstanding Alumni Awards Ceremony. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Dr. B. R. Ambedkar Humanitarian Award
Program code: UPAO-201
Value: $1000
Awarded: summer
Terms of reference: The recipient will have demonstrated a combination of outstanding academic achievement and outstanding leadership and/or service at SFU. This may be service to the University or by representing the University to the community at large. When possible, preference will be given to service in relation to human rights. Applicants may apply for the award themselves, or may be recommended by a member of the university community. Applicants should provide a copy of volunteer service with the application. Letters of recommendation will also be considered. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

BC Bearing Engineers Limited Award
Program code: UEAO-537
Value: $350
Awarded: fall
Terms of reference: Granted to a co-op student in any faculty who is doing his/her work term(s) in Latin America, including Mexico. The Award is intended to off-set travel and/or living expenses for the period of time (not exceeding one year) spent in Latin America, or Mexico. If more than one student applies for the award, then the best CGPA will be the deciding factor. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the director, co-operative education.

B.C. Sugar Achievement Award
Program code: UEAO-526
Value: $5250
Awarded: fall
Terms of reference: Granted to a SFU faculty, staff member, student or multiple of the same who meet the following criteria: winner of national or international competition, or recipient of national or international prize or award; history of leadership in reciprocal academic standing or academic accomplishment(s) relate directly to responsibilities and activities at SFU. Nominations of an individual or group should be forwarded to the Director, Student Academic Resources by April 15th of each year. Nominations should include a description of the nominee's achievements, a curriculum vitae (if appropriate), and three letters of recommendation.

Biological Sciences Undergraduate Research Award
Program code: UEAO-061
Value: $500
Awarded: spring
Terms of reference: The award will be granted based on research work carried out as an undergraduate. Written work, such as an Independent Study Semester report, Undergraduate Research (BISC 498 or 499) report, a published paper, or submitted manuscript is especially valuable in the deliberations for this award, but any evidence of strong research ability will be considered. Generally, the research must have been carried out at Simon Fraser University during the previous two years. Work carried out as part of a larger research effort (e.g. while working in an SFU faculty member's group) is eligible.

To apply, write a cover letter explaining the research and your role in it, and append a copy of the reports or other material. (These will be returned.) Solicit a letter of reference from the SFU faculty member who supervised or was closest to the work. Consideration will be given to the applicant's outstanding research potential, letters of reference and CGPA. A student may receive this award only once during their undergraduate career. Submit application to: Biological Sciences Scholarship Committee by January 30. The award will be made by the Senate Undergraduate Awards Adjudication Committee upon the recommendation of the Biological Sciences Department Scholarship Committee.

Deans' Convocation Medals
Program code: UEAO-002
Awarded: summer
Terms of reference: To a graduating student from each faculty. The dean of the respective faculty will recommend a student who is from the top 5% of graduating students within that faculty. The top 5% is defined by cumulative GPA. All nominations are to be forwarded to the assistant to the registrar.

Terry Fox Gold Medal
Program code: UUAO-001
Value: $1000
Awarded: summer
Terms of reference: To any person who has demonstrated those personal qualities of courage in adversity and dedication to society which have been exemplified by Terry Fox and his Marathon of Hope. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Alexander Fraser Award in Piping and Drumming
Program code: UEAO-011
Value: $500
Awarded: spring
Terms of reference: These awards are made following a competition among the pipers and drummers on campus. A cash award will be made to the student judged best in each of the two categories. In addition, a cash award may also be made to the student who has contributed most significantly to the development of Highland tradition at Simon Fraser University.

Gandhi Essay Award
Program code: N/A
Value: $350
Awarded: fall
Terms of reference: Simon Fraser University undergraduates, who have completed at least 30 credit hours and who are registered for courses in the current academic year (September-August) are eligible for the award. Essays should be typed and be no longer than 2500 words. Essays must be submitted to the Director, Institute of Humanities.

Governor General's Silver Medal
Program code: UPAO-001
Awarded: summer
Terms of reference: The silver medal will be awarded to the student whose record, in the opinion of the faculty, is the most outstanding in the graduating classes in any faculty. Eligible candidates should have completed a minimum of 60 credit hours at Simon Fraser University. The award shall be made to the student who has maintained a high scholastic standing during not fewer than six semesters or the equivalent of 60 credit hours or more at Simon Fraser University.

Stephen Harold Edward Herrin Prize
Program code: UEAO-048
Value: $1600
Awarded: summer
Terms of reference: The Herrin Prize will honour the development of a device or innovative way to restore lost functions and provide increased independence for people who have been paralyzed. Submissions will be evaluated by the Herring Committee based on the originality of the research, keeping in mind the contribution of direct and effective research in alleviation and curing injuries made by impact that caused any paralysis. Eligible candidates will be graduate or undergraduate students at SFU in any faculty. The submission should include a description of the research, device or innovation to alleviate or cure injuries causing paralysis and two letters of support from faculty who know the student well and can attest to the originality of the research and role played by the student. Submissions should be forwarded to Sincal Aid and Awards (MBC 3200) by April 15th. The Herrin Prize will be awarded at the February Awards Ceremony in the following year. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Stephen Herrin Prize Committee.

Hong Kong University BC Alumni Award
Program code: UEAO-538
Value: $1000
Awarded: spring
Terms of reference: To a Co-op student in any faculty who is doing his/her work placement in Hong Kong. The award is intended to offset travel and/or living expenses for the period of time (not exceeding one year) spent in Hong Kong. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the co-operative education program director.

Honor Roll
Program code: N/A
Awarded: fall, spring, summer
Terms of reference: A limited number of students will be admitted each term to the University honor roll, mainly on the basis of excellent work completed in the previous term. This award will be shown on the student's permanent record. Admission to the honor roll requires that the student: must have completed a minimum of 30 credit hours at Simon Fraser University by the end of the term being evaluated; must have completed at least 12 credit hours of credit in the term being evaluated; must achieve a minimum term GPA of 4.00 calculated on all normally graded courses completed in the term being evaluated.

International Co-operative Education Awards
Program code: UUAO-203
Value: variable
Awarded: fall, spring, summer
Awards will be available each term to students in good academic standing in any faculty who are accepted for a prioritized SFU International Co-operative Education placement. These awards will be granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Work Integrated Learning. In prioritizing placements, the Director of Work Integrated Learning's considerations will include but not necessarily be limited to the following: geographical location, salary rate and placement costs (i.e. work permits, association fees, immunization, travel, etc.) Awards will be made to students participating in prioritized placements on the basis of academic performance.

International Mobility Awards
Program code: UUAO-204
Value: variable
Awarded: fall, spring, summer
Awards will be available each term to students in good academic standing from any faculty who are accepted for an SFU International exchange or field school program in targeted locations. Award values will be determined based on location of the formal exchange or field school. Awards will be made to students participating in targeted programs on the
basis of academic performance and their engagement in internationalization activities (i.e. volunteer activities, mentorships, community activities, international work experience.) These awards will be granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the director, SFU International.

Judy Kelly Humanitarian Award
Program code: UEAO-522
Value: $725
Awarded: summer
Terms of reference: To an undergraduate student in any faculty who has provided volunteer services to the university community. Particular preference will be given to students who have provided aid to students with physical disabilities. Applicants may apply for the award themselves, or may be recommended by a member of the university community. Nominations or applications should be forwarded to the Director, Student Academic Resources by April 15th.

Living Personal Truths Award
Program code: UPAO-195
Value: $400
Awarded: summer
Terms of reference: The award is given to a student in any faculty who has demonstrated a significant contribution to breaking discrimination and/or increasing awareness of sexual orientation and gender diversity. Applications must include a letter and resume form the student and a supporting letter from an individual who can speak to their achievements. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

London Drugs 60th Anniversary Student Award
Program code: UEAO-540
Value: $1000
Awarded: spring
Terms of reference: The London Drugs 60th Anniversary Student Awards will be granted to graduate or undergraduate students in any Faculty whose volunteer activities have made a significant contribution to the development and/or improvement of campus community life. To be considered eligible, candidates must be in good academic standing and should demonstrate their involvement in unpaid volunteer activities by providing their resumé and cover letter describing their volunteerism, the length of service and time-commitment dedicated to such interests and include a letter of reference from a supervisor of the candidate’s volunteer work. The awards are granted by the Senate Undergraduate Awards Adjudication Committee. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Iain and Mary Ormsaig MacKinnon Memorial Award
Program code: UEAO-045
Value: $2500
Awarded: fall
Terms of reference: The award is granted to an undergraduate student who plays the bagpipe either as a solo musician or as part of any pipe band and has a CGPA of 2.5+. Applications for the award should include a letter of reference from an appropriate individual discussing the applicant’s activities as a solo piper or participation in a pipe band.

Meloche Monnex Outstanding Student Leadership Award
Program code: UPAO-199
Value: $1000
Awarded: summer
Terms of reference: The award will be granted to an student in any faculty who is in his/her 3rd or 4th year with a minimum of thirty (30) credit hours completed at SFU. The recipient will have demonstrated a combination of outstanding academic achievement and outstanding performance or leadership in another endeavor at SFU or in the broader community. The achievements may be in athletics or the arts, in service to the University or to the community at large. Applications must include a letter and resume from the student and a supporting letter from an individual who can speak to their achievements. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

The Mitsubishi Canada Limited Student Exchange Awards
Program code: UEAO-064
Value: $500
Awarded: fall, spring, summer
Terms of reference: The Mitsubishi Canada Limited Student Exchange Awards will be awarded annually to undergraduate students who are undertaking study in Japan on a Formal Exchange Program with one of SFU’s Japanese exchange partners. Eligibility criteria is as follows: 1) 2.7 Cumulative grade point average 2) Completion of at least one year of study at SFU 3) Two letters of reference from faculty 4) Accepted for enrollment by one of SFU’s Japanese exchange partners. Awards will be made on the basis of academic performance. The awards will be made by the Senate Undergraduate Adjudication Committee on the nomination of the Director, SFU International.

Muslim Students’ Association Award
Program code: UPAO-183
Value: $100
Awarded: fall
Terms of reference: One award valued at $300 will be available annually in the fall term. The award is granted to an undergraduate student in good academic standing from any faculty. The successful applicant will be involved in the Muslim Students’ Association for two semesters promoting better understanding and open dialogue between Muslims and the campus community at large. The applicant should submit a letter detailing his/her volunteer activities and a brief synopsis of how this activity helped to promote Islamic awareness.

C.D. Nelson Memorial Prize
Program code: UEAO-019
Value: $500
Awarded: summer
Terms of reference: The C.D. Nelson Memorial Prize was established at Simon Fraser University in 1975 in memory of Dr. C.D. Nelson, first head of Biological Sciences, who gave so fully of himself to the whole University community. One C.D. Nelson Memorial Prize, valued at approximately $500 for the purchase of a Work of Art, will be awarded annually. The prize will be granted to a current or retired faculty or staff member, or to a current student who has made an outstanding contribution to Simon Fraser University other than normal or academic work. Nominations should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th. The Prize will be made by the Senate Undergraduate Awards Adjudication Committee.

Dr. M. Sheila O’Connell Prize for Children’s Literature
Program code: UEAO-534
Value: $1500
Awarded: summer
Terms of reference: To an undergraduate student who has completed work in the general subject area of children’s literature, fiction or criticism or is working towards publication of a piece of children’s literature. A proposal outlining the story should be forwarded by candidates to the cross-disciplinary committee from the Faculty of Education, the Department of English and the School of Communication. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the joint committee.

Eileen Purkiss Memorial Endowment Award
Program code: UEAO-023
Value: $100
Awarded: summer
Terms of reference: The award will be available to graduate and undergraduate international students. In adjudicating the award, consideration will be given to the special contributions made by the student to the social and cultural exchange and development of international students at Simon Fraser University with specific reference to volunteer service, promotion of goodwill, and the organization of social, cultural and related events. Applications or nominations should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th, with appropriate letters of reference. The endowment fund is established in memory of Eileen Purkiss.

Recreation Leadership Awards
Program code: UUAO-110
Value: $500
Awarded: fall, spring
Terms of reference: The purpose of these awards is to recognize and encourage students’ contribution to, and development of, leadership initiatives in the University recreation programs. Up to 32 awards of $600 each are available to: entering students on the basis of recommendations from secondary school of demonstrated leadership in the school program, and to continuing students who have demonstrated consistent leadership skills and potential for further development. Students must be nominated by the Director of Recreational Services and Athletics, maintain a cumulative 2.00 grade point average and register in nine credit hours. Nomination will be made by the Director of Recreational Services and Athletics to the Senate Undergraduate Awards Adjudication Committee.

Recreation Promotion Award
Program code: UUAO-101
Value: $500
Awarded: fall, spring
Terms of reference: The awards recognize and encourage gifted physically active university students who contribute to the promotion of a university culture of physical activity. The award is available to entering and continuing full-time undergraduate students in good academic standing (maintain a minimum cgp of 2.00) who have demonstrated a personal physical activity commitment and promoted physical activity on-campus. Student must be nominated by the Director of Recreational Services and Athletics. The awards will be granted by the Senate Undergraduate Awards Adjudication Committee.

Renaissance Community Service Award
Program code: UPAO-204
Value: $1000
Awarded: summer
Terms of reference: Awarded on the basis of demonstrated academic performance and leadership and/or service at Simon Fraser University. The student’s leadership or service may be to the University community or by representing the University to the community at large. Application packages must include resume outlining the candidate’s leadership activities and volunteer services as well as letter(s) of recommendation confirming these activities. The award will be made by the Senate Undergraduate Awards Adjudication Committee. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Louise Berthe Samson Undergraduate Award
Value: $500
Program code: UEAO-060
Awarded: summer  
Terms of reference: To a third or fourth year undergraduate student who is doing volunteer work or a work project related to the applicant’s field of study in a recognized charitable or community organization. The successful applicant may be in any Faculty and should have a cumulative GPA of at least 3.0. The application should include a letter outlining the applicant’s chosen course of studies, a resume, an explanation of the volunteer or work project activity, and its impact on the applicant. There can be no more than a one term gap between the volunteer or work project activity and the awarding of the Samson Award. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Gordon M. Shrum Gold Medal  
Program code: UPAO-002  
Value: $500  
Awarded: summer  
Terms of reference: An award of a gold medal and $500 is to be awarded in May of each year to an outstanding student in any faculty who has completed the requirements for the Bachelor’s degree during the preceding summer, fall or spring term. The award shall be made to the student who has maintained a high scholastic standing during fewer than six semesters or the equivalent of 60 hours or more at Simon Fraser University and who, by participating in extracurricular activities, has shown outstanding qualities of character and unselfish devotion to Simon Fraser University. The award shall be made upon the recommendation of the Awards Committee after consultation with members of the faculty and representatives of the student body.

Simon Fraser University Pipe Band Memorial Award  
Program code: UEAO-043  
Value: $1500  
Awarded: fall  
Terms of reference: To a Simon Fraser University student playing with the University Pipe Band who has particular promise in piping or drumming and who has maintained a satisfactory academic record. Recommendation is required from the SFU Pipe Band Major.

Simon Fraser University Piping Award  
Program code: UUAO-008  
Value: $600  
Awarded: fall, spring, summer  
Terms of reference: Thirteen awards are available to SFU students who are members of the Simon Fraser University Pipe Band. The awards are awarded to full-time students in good academic standing in recognition of significant contribution to the University and community through their participation with the SFU Pipe Band. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director of Ceremonies.

Ted Sinnott Memorial Award  
Program code: UEAO-027  
Value: $525  
Awarded: summer  
Terms of reference: To a student who has made a contribution of a voluntary nature, to the University community, thereby reflecting positively the cheer and goodwill which the late Ted Sinnott generated at Simon Fraser University for so many years. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

William A. (Bill) Stewart Volunteer Leadership Award  
Program code: UEA0-049  
Value: $900  
Awarded: summer  
Terms of reference: To graduate or undergraduate students in any faculty whose volunteer activities have made a significant contribution to the development and/or improvement of campus community life. The application should include a letter from the student outlining his/her volunteer activities and the impact those activities have had on campus life. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Dr. Abe Unrau Memorial Co-op Prize  
Program code: UEAO-039  
Value: $400  
Awarded: summer  
Terms of reference: To an outstanding co-op student in any faculty who, at the time of graduation, has the highest cumulative grade point average and who has successfully completed a minimum of four work semesters. A student from the School of Engineering Science co-op program may also be considered if he/she has successfully completed three work terms and a research term (the undergraduate thesis project) producing an undergraduate thesis. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the director, co-op education program.

Joan H. Walter Memorial Award  
Program code: UEAO-020  
Value: $100  
Awarded: fall  
Terms of reference: This award will be awarded biennially to a student who has been employed in the Tour Guide Service. Special consideration will be given to the student’s willingness to serve and personal commitment to the University community and to the degree to which Simon Fraser University has been promoted with enthusiasm and accurate information. A nomination from the Director of Student Recruitment is required.

Roger G. Welch Alumni Prize  
Program code: UEAO-172  
Value: $1050  
Awarded: summer  
Terms of reference: To an alumnus/alumna of Simon Fraser University pursuing a degree program or a post baccalaureate diploma. The prize will honor or recognize students who have demonstrated leadership, citizenship and dedication in service to the University community. Participation in the wider community will also be considered. The granting of the prize will be based on evidence submitted by the applicant or by another person, group or association. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Westcoast Coalition for Human Dignity Community Service Award  
Program code: UEAO-201  
Value: $375  
Awarded: summer  
Terms of reference: The award is offered to students in any faculty based on demonstrated commitment to and leadership in opposing bigotry and advancing human rights through their work in schools, community or non-governmental organizations that work to eliminate racism, sexism, xenophobia, and/or homophobia or that work to provide services to victims of such. To be considered eligible, candidates must demonstrate their involvement in unpaid volunteer activities by providing their resume and cover letter describing their volunteerism, the length of service and time-commitment dedicated to such interests and including a letter of reference from a supervisor of the candidate’s volunteer work. Nominations or applications should be forwarded to Financial Aid and Awards (MBC 3200) by April 15th.

Awards for Applied Sciences Students  
Mark and Nancy Brooks Computing Science Innovation Award  
Program code: UEAO-052  
Value: $800  
Awarded: fall  
Terms of reference: An award, valued at $500, will be given to a Computing Science student in good academic standing who demonstrates exceptional accomplishment, promise or innovation in the area of computing science outside classroom work. The application should include a description of the interest or innovative ideas that the student is considering. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Computing Science.

Communication Alumni Endowment Award  
Program code: UEAO-155  
Value: $1800  
Awarded: summer  
Terms of reference: To a third or fourth year undergraduate student in Communication who submits the best essay in the field of Communication. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Communication.

Computing Science Graduation Award  
Program code: UEAO-529  
Value: $500  
Awarded: summer  
Terms of reference: To the top graduating student in Computing Science. If there are two students who qualify, the award will be given to the student who has demonstrated the most significant contribution to the computing science undergraduate student body or to the university. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director or the School of Computing Science.

Computing Science Student Society Award  
Program code: UEAO-042  
Value: $2000  
Awarded: fall, spring  
Terms of reference: To undergraduate students in Computing Science, who if declared majors, meet the GPA requirements to stay in the School, or if not a declared major, meet the School's GPA requirements to declare. Candidates need not have completed all the courses required to declare a major in Computing Science. Applicants must demonstrate service to the University community in particular to the undergraduate Computing Science Student Society and/or the Computing Science undergraduate student body. Financial need may be taken into account if more than one student qualifies for the award. Applications for the award should be submitted to the Director of the School of Computing Science and will include a letter discussing university community involvement or involvement with the Society. Recommendations from any member may be submitted to the Director. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director of the School of Computing Science in consultation with the undergraduate Computing Science student society. Applications for the award should be submitted to the Director of the School of Computing Science by January 2 (spring Award) or by September 1 (fall Award).

Electronic Arts Inc. Award of Excellence in Computing Science  
Program code: UPAO-186  
Value: $500  
Awarded: summer  
Terms of reference: An award, valued at $500, will be given to the top graduating student in Computing Science. The award recipient will be invited to visit the Electronic Arts (Canada) Inc. Studio. The award will be made by the Senate Undergraduate Awards Adjudication Committee.
Candidates must already be in possession of CPR, course work with a CGPA of 3.0 and higher.

Terms of reference: Available in the fall to a student of the undergraduate student body. Students must be in good academic standing to apply for award. Preference will be given to those students who have not previously received the award.

APPLICATIONS FOR THE AWARD SHOULD BE MADE TO THE DIRECTOR OF THE SCHOOL OF ENGINEERING SCIENCE.

Value: $2000

Program code: UEAO-523

Awarded: spring

Terms of reference: Available to a student enrolled in the Communications Honors program to assist with the cost of completing the Honors project. Preference will be given to a multi-lingual student whose Honors project addresses issues regarding the diversity of languages and cultures in the Greater Vancouver area with a focus on radio. Applications should be submitted to the School of Communication by January 2. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Communication.

Program code: UEAO-120

Value: $2000

Awarded: spring

Terms of reference: To student enrolled in the Communications Honors program to assist with the cost of completing the Honors project. Preference will be given to a student whose Honors project addresses recent issues in Communication (e.g., relating to television or to the production of a video). Applications should be submitted to the School of Communication by January 2. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Communication.

Program code: UPAO-191

Value: $100

Awarded: fall

Terms of reference: The Ken Spencer SFU Business/Engineering Venture Plan Competition is an annual competition for undergraduate students. The application should include a business plan which includes technical and business aspects, teams must consists of at least one undergraduate student from each of the Applied Sciences (Engineering) and Business Administration faculties. A Management of Technology MBA student with an engineering degree will be selected to assist the course instructors by providing mentorship to the competitors. This mentor will provide technical expertise and guide students as they hone venture plans and present their skills. As part of the courses BUS 477 and ENSC 201, students of both courses (with a minimum of one Business student and one Engineering student per team) will prepare a business plan to be graded jointly by the two course instructors. Typically, the business plan will comprise 35% of the course grade.

At the end of the term in which the courses are offered, the two course instructors will identify the top six business plans to be entered into the jury-adjudicated Ken Spencer Venture Plan Competition. Written and oral presentations will be made to the jury who will rank their recommended first, second and third place teams. Once the Venture Plan Competition Jury has determined their recommendations, the Chair of the Venture Plan Competition Jury will present and discuss the selected winners with the Deans of Applied Sciences and Business Administration who will forward their recommendations to the Senate Undergraduate Awards Adjudication Committee. Of the finalists, three teams will receive prizes - a First Prize of $3000, a Second Prize of $1500 and a Third Prize of $500. Prize values may change in succeeding years. Winners will be announced at an annual function attended by faculty, students and competition sponsors.

Program code: UEAO-050

Value: $1500

Awarded: summer

Terms of reference: To a student in the Film program who has shown exceptional scholarship and an interest in the application of Physical Science to Archaeology. This prize will be awarded by the Senate Undergraduate Awards Adjudication Committee on the nomination of the faculty members involved in Archaeometry.

Program code: UPEO-503

Value: $300

Awarded: summer

Terms of reference: To a student in the Film program who has shown exceptional scholarship and an interest in the application of Physical Science to Archaeology. This prize will be awarded by the Senate Undergraduate Awards Adjudication Committee on the nomination of the faculty members involved in Archaeometry.
Terms of reference: Grant to an undergraduate student in the School for Contemporary Arts, film major program whose fourth year film/video project best invokes Noel Archambault’s spirit of independence, innovation and technical ingenuity. The award will be adjudicated on the basis of the proposal for their upcoming fourth year film or video project the film major students present at the conclusion of their third year in the film program. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the director, School for Contemporary Arts.

Jane Austen Society Prize
Program code: UPAO-132
Value: $125
Awarded: summer
Terms of reference: To a student for the best essay by an upper level undergraduate student on the subject of Jane Austen, her life, works, or closely related social history. The award will be made by the Senate Psychology to a graduating student who has completed a minimum of two semesters of French studies. The awards will be made in each of three categories: a graduate French based on academic performance. Awards will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the Chair, Department of French. The Department of French reserves the right to withhold one or both prizes in any given year.

Bice Caple Awards
Program code: UPAO-005
Value: $100
Awarded: fall
Terms of reference: Outstanding contribution to the Fine Arts at Simon Fraser University during the previous year. During the tenure of the award each recipient must: • be a registered student at Simon Fraser University • pursue a course of studies and demonstrate academic competence • continue to be active in Arts at Simon Fraser University

William L. Cleveland Essay Prize in African Middle-Eastern Asian History
Program code: UEAO-053
Value: $200
Awarded: summer
Terms of reference: The author of a superior undergraduate term report or essay on any topic concerning African, Middle-Eastern or Asian History. Special consideration will be given for originality in analysis and treatment of the area. Essays are to be submitted to the History Department by April 15, and must have been written in one of the three previous semesters.

Consulat General de France in Vancouver Book Prizes in French Studies
Program code: UPAO-193
Awarded: summer
Terms of reference: The Consulat General de France in Vancouver provides annual book prizes to graduate and undergraduate students in the Department of French based on academic performance. Awards will be made in each of three categories: a graduate student, a graduating undergraduate student and an undergraduate student who has completed at least two semesters of French studies. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the Chair, Department of French.

Simon Fraser University Service Awards (Contemporary Arts)
Program code: UUAO-000
Value: $100
Awarded: fall, spring, summer
Terms of reference: To students in the School for Contemporary Arts who have made a significant contribution in their field of study. Candidates must have been registered in a minimum of six credit hours (hours with a calculated GPA) with satisfactory academic standing in the qualifying term of contribution. Graduate students may also be recognized for these awards. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the director, School for Contemporary Arts.

Criminology Award in Diversity & Public Safety
Program code: UPAO-194
Value: $750
Awarded: summer
Terms of reference: An award will be made available to an undergraduate student in Criminology, studying the interaction between visible minorities and traditional Canadian crime prevention programs and law enforcement. The Award will be granted by the Senate Undergraduate Awards Adjudication Committee, on the nomination of the Director of the School of Criminology.

Paul Delany Graduation Award in English
Program code: UEAO-058
Value: $200
Awarded: summer
Terms of reference: Awarded annually to the student graduating with the highest CGPA upon completion of an English major. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the English Department.

The Jack Knetsch Award
Program code: uea-542
Value: $250
Awarded: summer
Terms of reference: The Jack Knetsch Award provides an annual award to the student with the best essay in the Economics Honours Thesis Course. The Award will be made by the Senate Undergraduate Awards Adjudication Committee upon a nomination from the current Economics Honours Thesis Course Instructor and the Undergraduate Chair.

Aisenring Gerontology Award
Program code: UEAO-041
Value: $1000
Awarded: fall
Terms of reference: To an undergraduate mature student whose area of study is Gerontology. A departmental nomination is required from the Chair of Gerontology.

European History Book Prize
Program code: UEAO-174
Value: $275
Awarded: summer
Terms of reference: The author of a superior undergraduate term report or essay on any topic concerning European history. Special consideration will be given for originality in analysis and treatment of the area. Essays are to be submitted to the History department by April 15th and must have been written in one of the three previous semesters. The department of History awards committee will make a nomination to the Senate Undergraduate Awards Adjudication Committee. The History department will undertake to publicize and adjudicate the essay competition.
French Cohort Program Language Training Award  
Program code: UUAO-202  
Value: $2300  
Awarded: summer  
Terms of reference: Awarded to student(s) enrolled in the French Cohort Program at SFU to cover the costs associated with attending a French summer language program, of at least 4 weeks’ duration, within an accredited Francophone university or college.  
Application must be made by letter to the Associate Director, FASS, Office of Francophone and Francophone Affairs, and must include confirmation of acceptance in a French summer language program within an accredited Francophone university or college, a statement describing the relevance of the language program to the student's academic program at SFU and two letters of reference from SFU faculty.  
Consideration will be given to the applicants’ GPA, the importance of the language training to the student’s program of study, and the letters of reference.  
Application deadline is March 15th. The Award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Women's Studies.  

Evelyn Lett Award in Women's Studies  
Program code: UPAO-196  
Value: $2500  
Awarded: summer  
Terms of reference: To an undergraduate student who is enrolled in a Women's Studies major or joint major, Women's Studies minor, Women's Studies extended minor or Gender Studies minor. Preference will be given to those students who have contributed to the Women's Studies Department and/or to women's issues on campus or in the community. Student should document their community service in a letter and resume along with their application package. The award is granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Women's Studies.  

Cliff Lloyd Memorial Award  
Program code: UEAO-016  
Value: $500  
Awarded: summer  
Terms of reference: To an honors student in economics graduating with the highest CGPA. The Awards will be made by the Senate Undergraduate Awards Adjudication Committee upon a nomination from the Chair of Economics.  

Barry and E. Anne MacDonald Asia-Canada Awards  
Program code: UEAO-525  
Value: $1500  
Awarded: summer  
Terms of reference: Awarded to students in Asia-Canada Program attending a field school or exchange program through Simon Fraser University. Applications should include a letter outlining the student's goals for participation in the field school or exchange program, a resume and academic record. If no suitable field school or exchange program candidate is identified in a given year, the award will be made to the top third or fourth year student in the Asia-Canada Program. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Asia-Canada Program.  

Marcia Scholarship in Electroacoustics  
Program code: UEAO-130  
Value: $350  
Awarded: summer  
Terms of reference: To a graduate or undergraduate student from any discipline who shows promise and/or excellence in the field of electroacoustics, whether for composition, research, performance or production. A department nomination is required.  

Gerald and Sheahan McGavin Award  
Program code: UEAO-056  
Value: $1500  
Awarded: summer  
Terms of reference: To undergraduate students in the School for Contemporary Arts based on demonstrated volunteer involvement in community service and academic merit. The application must include a detailed discussion of the student's volunteer involvement in community activities. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School for Contemporary Arts.  

Richard Morgan Memorial Book Prize  
Program code: UEAO-038  
Value: $300  
Awarded: summer  
Terms of reference: To an undergraduate student who submits a superior term report or essay on any topic concerning Canadian Native history. Special consideration will be given for originality in analysis and treatment of the area. Essays are to be submitted to the history department by April 15, and must have been written in one of the three previous semesters. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Department of History Awards Committee.  

Ingrid Nyström Archaeology Award  
Program code: UEAO-180  
Value: $1600  
Awarded: spring  
Terms of reference: To an undergraduate student majoring in Archaeology to further studies in archaeology or physical anthropology. Please consult the Archaeology Department for further details and application procedures by November 1st.  

Margaret Ormsby History Prize  
Program code: UEAO-521  
Value: $275  
Awarded: summer  
Terms of reference: For the best essay written by an undergraduate upper level student enrolled in a Canadian history course at Simon Fraser. Special consideration will be given for originality in analysis and treatment of the subject. Essays are to be submitted to the history department by April 15th, and must have been written in one of the three previous semesters. Margaret Ormsby, the doyen of historians of British Columbia, wrote the standard work on the history of the province, served for ten years (1965-75) as the head of the history department at the University of British Columbia and as president of the Canadian Historical Association in 1965-66, and was awarded an honorary doctorate by Simon Fraser University in 1971. The prize will be managed by the history department and will be awarded on the nomination of the Ormsby prize committee to the department. The history department will undertake to publicize and adjudicate the essay competition. The prize will be granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of History.  

Helen Pitt Graduating Award in Visual Arts  
Program code: UPAO-189  
Value: $1000  
Awarded: summer  
Terms of reference: The Helen Pitt Graduating Award in Visual Arts will be awarded in the summer term to a graduating student with an approved major or extended minor in Visual Arts. The award will be given by the Senate Undergraduate Awards Adjudication Committee on the nomination of the School for the Contemporary Arts Visual Arts Committee.  

Philippa Polson Memorial Prize in English  
Program code: UEAO-059  
Value: $250  
Awarded: summer  
Terms of reference: To a student for the best English honors essay completed during the year. The Department of English Undergraduate Committee will consider all essays completed during the year. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of English.  

Psychology Alumni Honors Prize  
Program code: UEAO-037  
Value: $500  
Awarded: summer  
Terms of reference: To a student who is a member of the Psychology Alumni Association. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of English.  

Program code: UPAO-200  
Value: $1500  
Awarded: spring  
Terms of reference: Awarded to a third or fourth-year student(s) who have completed two Humanities courses. Application must be made by March 15th by letter to the Director, Institute for the Humanities, and must include a resume, a copy of university transcript, a statement describing the relevance of the program/field school to the student's academic program and goal and two letters of reference from SFU faculty. Consideration will be given to the applicants’ GPA, the importance of the field school to the student's program of study, and the letters of reference. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Institute for the Humanities.  

Nick Kravaristis Memorial Scholarship in Hellenic Studies  
Program code: UEAO-200  
Value: $600  
Awarded: summer  
Terms of reference: Granted to a student with the highest GPA in intermediate modern Greek language. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Hellenic Studies.  

Betty Lambert Memorial Prize  
Program code: UEAO-014  
Value: $325  
Awarded: summer  
Terms of reference: To an undergraduate student enrolled in at least nine credit hours. The prize will be based upon the best unpublished play submitted. Students must apply to the Department of English by February 15th. The endowment fund is established in memory of Betty Lambert.  

Evelyn Lett Award in Women's Studies University Women's Club of Vancouver  
Program code: UPAO-196  
Value: $1300  
Awarded: spring  
Terms of reference: The award is available to a student who is enrolled in a Women's Studies major or joint major, Women's Studies minor, Women's Studies extended minor or Gender Studies minor. Preference will be given to those students who have contributed to the Women's Studies Department and/or to women's issues on campus or in the community. Student should document their community service in a letter and resume along with their application package. The award is granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Women's Studies.  

Stephen McIntyre Book Prize in History  
Program code: UPAO-018  
Value: $500  
Awarded: fall  
Terms of reference: To an undergraduate student in the School for the Contemporary Arts majoring in music. The successful applicant will be a full-time student who achieved a GPA of 3.5 or more in their previous semesters of full-time studies at Simon Fraser University. Preference, when possible, will be given to students who have returned to full-time studies subsequent to a substantial interruption of their academic career after secondary school. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, School for Contemporary Arts.
Terms of reference: To a student enrolled in Psychology 490/499. The award will be based on the quality of research conducted for the Honours project. The recipient will be expected to give a talk on his/her research at the Psychology Department's annual convention. Both graduates and undergraduates are eligible. Awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Psychology Department.

Rama Reddy Political Science Award
Program code: UEAO-027
Value: $400
Awarded: summer
Terms of reference: To the top graduating student in Political Science. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Political Science Department.

Simon Fraser University Gold Medal and Prize in History
Program code: UPAO-026
Value: $1000
Awarded: spring
Terms of reference: Each year (2006-2008), eight students will be selected for participation in the Program and be provided with a $1000 stipend to prepare and deliver a piece of work suitable for publication or performance at a special conference to be organized that year. Paper topics should focus on one or more of the themes of the Institute for the Humanities Imagining Citizenship Project: environment, culture, social justice, religion, the university, modernity. The program is open to all SFU graduate and upper level undergraduate students. Students should submit a letter of application together with a one-page abstract summarizing the proposed topic and approach, a resume, a sample of written work (no more than six pages) and a transcript to Institute for the Humanities by March 31 each year. Successful applicants will be notified by April 30. Awards will be made by the Senate Undergraduate Adjudication Committee on the nomination of the subcommittee of the Institute for the Humanities' steering committee.

Robert L Stanfield Book Prize
Program code: UEAO-028
Value: $100
Awarded: summer
Terms of reference: To outstanding graduating students in Political Science. Awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Political Science Department.

F.W. Sullivan Visual Arts Award
Program code: UEAO-029
Value: $100
Awarded: summer
Terms of reference: To a student majoring in the Centre for the Arts Visual Arts Program. The award will be based upon a student's contribution to the visual arts and the financial need associated with the public exhibition of his or her work. Nominations will be forwarded from the Centre for the Arts to the Senate Undergraduate Awards Adjudication Committee.

Prize of the Ambassador of Switzerland in Canada
Program code: UPAO-022
Awarded: summer
Terms of reference: To students in their final year with the highest grades in German and French languages on recommendation by the Department (for German) and the Department of French (for French).

Winnie Topping Memorial Prize
Program code: UEAO-032
Value: $150
Awarded: summer
Terms of reference: To a female student in honors Anthropology or Sociology who shows the greatest promise of becoming both a scholar and a humanitarian. Applicants must submit a letter of nomination from a faculty member of the Department of Sociology and Anthropology.

Volunteers of the Burnaby Art Gallery Award in Visual Arts
Program code: UEAO-046
Value: $750
Awarded: summer
Terms of reference: To the most promising student in third year in the Visual Arts major program. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of Political Science Department.

Brian Williamson Memorial Award in Archaeology
Program code: UEAO-015
Value: $1100
Awarded: spring
Terms of reference: To a student who has declared a major in Archaeology, is registered in a minimum of 9 credit hours (not necessarily in Archaeology) when application is made and intends to use the Award to help defray travel costs to participate in field research in Archaeology or Physical Anthropology. The Award will be based on the student's academic achievements, and relevance of travel to the student's academic career. Applications should be sent in writing to the Chair, Department of Archaeology. The application should include: evidence that the student is an Archaeology major in good academic standing, copy of most recent transcript, a statement describing how the Award will be used and any other relevant information that will aid the Committee in their decision. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Department of Archaeology Undergraduate Awards Committee.

Zoe Award in Painting or Sculpture
Program code: UPAO-192
Value: $500
Awarded: summer
Terms of reference: An annual award of $500 will be made annually to a SFU student from the School for the Contemporary Arts. The award will go to an undergraduate student in their final year of study for the production of work that uses contemporary painting or sculpture in an innovative and challenging way. Student recipients will be invited to meet Robert Wilson at a luncheon hosted by University Advancement. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School for the Contemporary Arts.

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Awards for Business Administration Students
Peter R.B. Armstrong/Rocky Mountaineer Award for Entrepreneurship
Program code: UEAO-051
Value: $2500
Awarded: fall
Terms of reference: Granted to 3rd or 4th year students in the Faculty of Business Administration who have evidenced or achieved some level of entrepreneurial activities. Applications should include a letter discussing the student's interest and involvement in entrepreneurial activities.

Samuel Belzberg Award of Excellence in Finance
Program code: UEAO-035
Value: $450
Awarded: summer
Terms of reference: To an outstanding graduating student in Finance who has also made an important voluntary contribution to the University community or who has otherwise demonstrated leadership and management capability. The award is supported by The Diamond Fund in Business. A departmental nomination is required.

Business Administration Students Endowment Fund Prizes
Program code: UEAO-006
Value: $100
Awarded: summer
Terms of reference: To the two finalists in the Dean's Medal competition. Students will be chosen by the Dean of Business Administration.

Cohen Fund in Business - J. Segal Prize
Program code: UEAO-036
Value: $600
Awarded: summer
Terms of reference: To the top undergraduate graduating Business Administration student in Marketing. This prize is supported by the Cohen Fund in Business. Departmental nomination is required.

Dean's Student Service Award
Program code: UUAO-209
Awarded: spring
Terms of reference: In 1995, the Dean of the Faculty of Business Administration established the Dean's Student Service Award. The purpose of the award is to recognize outstanding service in the university community by an undergraduate student in the Faculty of Administration. The Dean's Student Service Award will be awarded annually in the spring term to recognize service in the preceding calendar year. The award, an engraved plaque and a gift, will be granted to a student, approved in a Business program, who has been nominated by the executive of a Faculty of Business Administration student club as their most valuable member. The student should have a minimum CGPA of 3.0 and must have been active in one of the student clubs in two of the three semesters in the preceding year. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Business Administration.

Ernst & Young Chartered Accountants Accounting Award
Program code: UPAO-197
Value: $2000
Awarded: fall
Terms of reference: To a 3rd or 4th year student in Business Administration with an approved Accounting concentration who is in good academic standing. The award will be made on the basis of involvement in volunteer and leadership activities. Applicants must supply documentation to demonstrate their involvements.
Awards for Education Students

Jean G.K. Bailey Memorial Award
Program code: UEAO-004
Awarded: summer
Terms of reference: To a student who entered the Professional Development Program in September, and a student who entered in January. The awards will be a three year membership in the National Society for the study of Education. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

Dr. Maxwell A. Cameron Memorial Medals and Prize
Program code: UPAO-007
Value: $250
Awarded: summer
Terms of reference: Granted to students in the Faculty of Education, one to a student in the elementary or middle school stream, and another to a student in the secondary stream. The prizes will be given in the summer term to the outstanding student in each stream based on his/her academic accomplishments and overall performance during the completion of the Professional Development Program practica. The prizes commemorate the distinguished life and work of Dr. Maxwell A. Cameron (1907-1951), first director of the School of Education at the University of British Columbia and author of the Cameron Report on Education. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

Claude E. Lewis Award
Program code: UEAO-015
Awarded: summer
Terms of reference: Granted in the fall or spring term to each of two students who have demonstrated excellence in overall performance during completion of the Professional Development Program in the Faculty of Education. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

Professional Development Program Awards of Excellence
Program code: UUAO-003
Value: $500
Awarded: summer
Terms of reference: Awarded in recognition of excellence in overall performance during the Professional Programs practica and coursework as well as for demonstrated potential and future professional growth. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

University Women's Club of Vancouver Laura Tripp Award
Program code: UEOA-054
Value: $1000
Awarded: summer
Terms of reference: Awarded to a student who has completed six credit hours in the Summer Term at the University of British Columbia. The recipient must be a member of the University Women's Club of Vancouver and a student who entered in January. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

Awards for Science Students

Archaeometry Prize
Program code: UEOA-003
Value: $300
Awarded: summer
Terms of reference: To an undergraduate or graduate student who has shown exceptional scholarship and an interest in the application of Physical Science to Archaeometry. This prize will be awarded by the Senate Undergraduate Awards Adjudication Committee on the nomination of the faculty members involved in Archaeometry.

Biological Sciences Merit Award
Program code: UESO-205
Value: $2400
Awarded: fall
Terms of reference: To a Biology major who has the highest academic record at the conclusion of the sixth term of study on the equivalent of one year. A student may receive this award only once during their undergraduate career. Awarded upon nomination of the Department of Biological Sciences.

Chemistry Book Award - Dr. E.J. Wells
Program code: UEOA-008
Value: $75
Awarded: summer
Terms of reference: Awarded to graduating students in Chemistry, Chemical Physics or Biochemistry for outstanding graduation grade point average. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Department of Chemistry.

Dean of Science Award
Program code: UEOA-009
Value: $275
Awarded: fall
Terms of reference: Awarded on the basis of academic merit to a student in the Faculty of Science, who has completed a minimum of 90 credit hours in a major or honors degree program. The prize will be based upon the student's cumulative GPA in the previous two semesters of full-time study at Simon Fraser University (at least 12 credit hours credit in each term) and the nominee will be nominated by the Faculty of Science undergraduate curriculum committee.

Rudi Haering Award in Physics
Program code: UEAO-013
Value: $350
Awarded: summer
Terms of reference: On the nomination of the Physics Department to an outstanding Physics or Chemical Physics undergraduate who has completed at least two years of study. A book prize may be included as part of the award. Established by members of the Simon Fraser University Physics Department in honor and recognition of Dr. R. R. Haering, founding Department Head and Professor, 1964-72.

Management and Systems Science Prize
Program code: UEOA-040
Value: $350
Awarded: summer
Terms of reference: The Management and Systems Science Graduation Prize is an annual award valued at approximately 20% of the awardable income from the Management and Systems Science Endowment. The award will be given to an outstanding graduating student who has exhibited leadership through entrepreneurial skills, contribution to the program or contribution to the university in general. To be eligible, a student must be completing his/her degree in the preceding fall term, the spring term of the award or the summer term following the award. Students may be nominated for the award by faculty members in any of the constituent departments of the MSSC program, the executive of MSSC Student Society or Co-op coordinators placing MSSC students. The Management and Systems Science Prize provides an annual award valued at approximately 80% of the awardable income from the Management and Systems Science Endowment. Two prizes are available to students with an approved MSSC major or honors program and a minimum CGPA of 3.00. One prize will be given to a student in their third year of the program and one prize to a student in the fourth...
year or higher. Preference should be given to a student who has not previously received the award. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Department of Mathematics. The fund provides support to further mathematics undergraduate education at Simon Fraser University and seeks to encourage secondary school students to enter into the study of mathematics.

Physics Charter Faculty Prize
Program code: UEOA-055
Value: $500
Awarded: spring
Terms of reference: The prize will be given annually to the top graduating student in any major or honours Physics program, on the recommendation of the Chair of Department of Physics.

Putnam Awards
Program code: UPAO-024
Value: $100
Awarded: spring
Terms of reference: Awarded by the Department of Mathematics to Simon Fraser University students listed as top participants in the William Lowell Putnam Mathematical Competition. The winners will be determined according to the official list provided by the organizers of this competition. The ranking and the financial value of the award are as follows.

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<tr>
<th>Rank</th>
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<tr>
<td>P</td>
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<td>Top 500</td>
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Department of Statistics and Actuarial Science Awards
Program code: UEOA-018
Value: $50
Awarded: spring
Terms of reference: Awards will be given to full-time students in the Department of Statistics and Actuarial Science on the nomination of the Chair, Department of Statistics and Actuarial Science. The fund provides support to further statistical and actuarial undergraduate education at Simon Fraser University and seeks to encourage secondary school students to enter into the study of Statistics and Actuarial Science.

 Wes Sydor Memorial Co-op Award
Program code: UEOA-063
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a full-time Science & Environment undergraduate co-op student who has demonstrated outstanding performance on a Co-Operative Education work placement focusing on science projects in any of the last three semesters. The award will be given upon the successful completion and return of the co-op student from the work placement. Applicants should submit a resume outlining their community involvement. Volunteer work through sports organizations will be considered. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Co-Operative Education.

Webber Chemistry Co-op Book Prize
Program code: UPAO-031
Value: $50
Awarded: summer
Terms of reference: Awarded to Chemistry students who have completed a co-op term in the year, have demonstrated excellence in their work placement and have the highest CGPA. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Department of Chemistry.

Awards for Student Athletes
Regulations for Athletic Awards
The following regulations apply to athletic and recreation awards:
- Students must have achieved a minimum cumulative grade point average of 2.0 in the previous term and must not be on academic probation, or, in the case of a first term or transfer student, must possess an equivalent high school or college standing.
- Undergraduate students must be eligible to compete and be registered in a minimum of nine credit hours of normal graded courses in the term of eligibility. Challenge, audit, and credit-free courses are not considered. Students who register in fewer than nine credit hours or subsequently drop below nine hours may have their awards cancelled.
- Graduate students must be eligible to compete and be registered for residence credit in an approved full-time program. Students who do not register or subsequently change to on-leave status may have their awards cancelled.
- Only one competing term will be allowed between the term in which the registered student made their contribution and the term in which the award is adjudicated.
- If a student is nominated by the director, recreation services and athletics.
- Funds will be credited to the successful student's account with the University. Outstanding debts to the University will be deducted from the award funds before a cheque for the credit balance is issued.

Joe Vieira Award for Swimming
Program code: UEA-115
Value: $800
Awarded: fall, spring, summer
Terms of reference: The award(s) will be granted to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as members of the SFU Men's or Women's Swimming and Diving teams. Academic accomplishment may be considered in selection of the recipient. Awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Recreational Services and Athletics.

Bob Ackles Sports Administration Award
Program code: UEOA-001
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student in good academic standing in any faculty who has demonstrated high standards of leadership in the management or administration of SFU Athletic, Recreation or Intramural programs.

Yolande D. Anderson Women's Basketball Award
Program code: UEOA-060
Value: $800
Awarded: fall, spring, summer
Terms of reference: To a full-time student in good standing who is on the Simon Fraser women's basketball team and who demonstrates athletic ability in basketball.

G.F. Kym Anthony Memorial Award in Football
Program code: UPAO-021
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The award is based on athletic merit in the wrestling program and will be awarded to a full- or part-time student in good standing who is a wrestler attending Simon Fraser University.

Tony Antunovic Memorial Award in Football
Program code: UPAO-021
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The award will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as a member of the Varsity Men's Football team. Academic accomplishment may be considered in selection of the recipient. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Recreational Services and Athletics.

Aon Reed Stenhouse Inc. Athletic Award
Program code: UEOA-034
Value: $350
Awarded: fall, spring, summer
Terms of reference: Athletes who meet the academic requirements and demonstrate outstanding athletic ability.

C.G. "Chuck" Arnold Golf Award
Program code: UEOA-002
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student who has demonstrated outstanding ability in golf and meet the academic requirements. Preference will be given to residents of the Lower Mainland of BC.

Athlete Assistance Awards
Program code: UUAO-105
Value: $250
Awarded: fall, spring, summer
Terms of reference: A number of awards are available each term from funds raised by SFU athletic teams to assist student athletes in meeting educational costs. Candidates must be members of an SFU athletic team and have demonstrated dedication to their sport. Recipients must be registered in nine credit hours and maintain a CGPA of 2. Awards will be made by the Senate Undergraduate Awards Adjudication Committee on nominations from the Director of Recreational Services and Athletics.

Athletic Entrance Awards
Program code: UUAO-104
Value: $1000
Awarded: fall, spring, summer
Terms of reference: Four awards valued at $1,000 are available to students on the basis of demonstrated leadership in an intercollegiate sport. Students must maintain a 2.00 CGPA and be registered in nine credit hours during the tenure of award.
Athletic and Recreation Awards
Program code: UUAO-100
Value: $700
Awarded: fall spring
Terms of reference: The purpose of the Athletic and Recreation Awards is to recognize significant contributions to the athletic activities of Simon Fraser University, or to recognize excellence in extra-curricular, amateur athletic activities. Up to 50 awards valued at $700 each, available to students who:
• have achieved a minimum grade point average of 2.00 in the previous term and must not be on academic probation, or, in the case of a first term or transfer student, possess an equivalent high school or college standing.
• are registered in nine or more hours of normally graded courses. Students who register in less than nine hours or subsequently drop below nine hours may have their awards cancelled.
Nomination will be made by the Director of Recreational Services and Athletics to the Senate Undergraduate Awards Adjudication Committee.
Bank of Nova Scotia Football Award
Program code: UEAA-003
Value: $300
Awarded: fall, spring, summer
Terms of reference: To a student registered in a program of study in any faculty at Simon Fraser University demonstrating outstanding ability in football, as well as proven academic achievement. This $300 self-perpetuating athletic award has been established by the Bank of Nova Scotia.
BC Athlete Assistance Program
Program code: UXAA-001
Value: $250
Awarded: fall, spring
Terms of reference: The BC Athlete Assistance Program is an athlete-centred program of financial assistance administered by the Sport Branch of the Ministry of Small Business and Economic Development. The program seeks to recognize and support high performance BC athletes striving to represent the Province of BC and Canada in athletic competition. Awards will be allocated to athletes based on their demonstrated potential to high performance sport and academic excellence, their commitment to high performance sport based on minimum eligibility criteria.
BC Lions Football Award
Program code: UEAA-004
Value: $100
Awarded: fall, spring, summer
Terms of reference: The award will be given to student in good academic standing in any faculty who has demonstrated high standards of leadership and performance in playing on the varsity football team. Preference will be given to students with high academic standing.
BCTV Broadcasting System Ltd Athletic Award
Program code: UEAA-015
Value: $500
Awarded: fall
Terms of reference: To students who meet the athletic requirements and have satisfactory academic standing.
BC Wrestling Association Alumni Award
Program code: UEAA-022
Value: $500
Awarded: fall, spring, summer
Terms of reference: To students who exhibit exceptional ability in wrestling and meet the academic requirement.
British Columbia Wrestling Association Award for Women's Wrestling
Program code: UEAA-113
Value: $500
Awarded: fall, spring, summer
Terms of reference: To students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as members of the SFU Women's Wrestling team. Academic performance may be considered in selection of the recipient. The award will be disbursed by the Senate Undergraduate Awards Adjudication Committee upon the recommendation of the Director, Recreational Services and Athletics.
Beedie Construction Company Ltd (Keith & Betty Beedie) Award in Women's Softball
Program code: UEAA-032
Value: $600
Awarded: fall, spring, summer
Terms of reference: To a student in any faculty who is a member of the SFU Women's Softball team and is in good academic standing.
David Beneteau Wrestling Awards
Program code: UEAA-093
Value: $450
Awarded: fall, spring, summer
Terms of reference: One or more awards will be given to a full-time student(s) who is in good academic standing in any faculty and is a member of the Varsity Men's Wrestling team. High standards of leadership, academic performance and academic accomplishment may be considered in selection of the recipient. The recipient should be a member in good standing with the "British Columbia Amateur Wrestling Association". Preference, when possible, will be given to at least one student who comes from the province of Ontario. Confirmation of this latter condition may be in writing by the student and/or SFU Head Wrestling Coach.
Best Facilities Services Ltd Athletic Award
Program code: UEAA-017
Value: $250
Awarded: fall, spring, summer
Terms of reference: An athlete who meets the academic requirements and exhibits outstanding ability.
John Buchanan Men's Soccer Award
Program code: UEAA-106
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student in any faculty in good academic standing who is a member of the Men's Soccer team. A letter of recommendation from the Head Soccer Coach should accompany the application.
Buster's Towing, Angus Arthron MacLennan Award in Golf
Program code: UEAA-105
Value: $500
Awarded: fall, spring, summer
Terms of reference: To an undergraduate student in any faculty in good academic standing who is a member of the Men's Soccer team. A letter of recommendation from the Head Soccer Coach should accompany the application.
Canadian National Railways Athletic Award
Program code: UEAA-005
Value: $75
Awarded: fall, spring, summer
Terms of reference: To a student who is registered in a program of study in any faculty at Simon Fraser University and who exhibits outstanding ability in the sport of football, as well as proven academic achievement. The self-perpetuating athletic award has been established by Canadian National Railways.
Carrera Alumni Award in Wrestling
Program code: UEAA-019
Value: $1000
Awarded: fall spring
Terms of reference: To a senior active in wrestling at Simon Fraser who meets the academic and academic requirements. Preference will be given to a Centennial Senior Secondary School graduate.
Jim Ciccone Men's Basketball Award
Program code: UEAA-084
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a full or part-time student in good standing who is attending Simon Fraser University and is on the Basketball team. Preference, when possible, will be given to SFU students from Northern BC, or to students from BC. The award is based on athletic merit in the Men's Basketball Program.
Clansmen Athletic Alumni Society Award
Program code: UPAA-013
Value: $500
Awarded: fall
Terms of reference: Provides for annual award(s) to entering or continuing students who are involved in the intercollegiate football program and demonstrate outstanding ability in the sport of football.
Coca-Cola Student Athlete Awards
Program code: UPAA-018
Value: $500
Awarded: fall, spring, summer
Terms of reference: To students who are members of a varsity athletic team at Simon Fraser University. Awards may be granted in any term. The recipients must be in good academic standing.
Moira Colbourne Field Hockey Award
Program code: UEAA-018
Value: $500
Awarded: fall, spring
Terms of reference: The Awards will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as team members of the women's field hockey team. Academic accomplishment may be considered in selection of the recipient.
Credit Union Central of British Columbia Athletic Award
Program code: UEAA-016
Value: $200
Awarded: fall, spring, summer
Terms of reference: Annual award of approximately $300 to a student who is registered in a program of study in any faculty at SFU and who exhibits outstanding ability as well as proven academic achievement.
W. Lorne Davies Athletic Excellence Award
Program code: UEAA-080
Value: $2000
Awarded: spring
Terms of reference: The outstanding male and the outstanding female varsity athlete of the year. Two awards may be given in either category if there are two equal candidates. Recipients must be full-time students. The awards will be granted at the Simon Fraser University Athletics Banquet.
W. Lorne Davies Senior Graduation Award
Program code: UEAA-079
Value: $1000
Awarded: spring
Terms of reference: To a senior SFU varsity athlete with at least 90 credit hours of which 48 credit hours are at Simon Fraser University. The recipient will have completed their senior year of athletic eligibility as identified by the NAIA. The Award will be announced at the March Awards banquet and will be granted to a registered student in the spring at the discretion of the student and/or SFU Head Wrestling Coach as a self-perpetuating award to assist administered by the Sport Branch of the Ministry of Small Business and Economic Development.

Purpose is to fulfill the philosophy of W. Lorne Davies that all varsity athletes should achieve graduation.

**Larry K Davis/Bravo International Services Corp. PNB Award in Golf**
Program code: UEAA-020
Value: $250
Awarded: fall, spring, summer
Terms of reference: To a full-time student in good standing who is on the golf team at Simon Fraser University.

**Les and Greg Edgelow Wrestling Award**
Program code: UEAA-058
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a first year student (preference given to a student from the BC interior) in good standing who is on the University wrestling team and who is registered full-time. The award is also based on athletic merit in wrestling.

**Field Hockey Endowment Fund Awards**
Program code: UEAA-012
Value: $250
Awarded: fall, spring, summer
Terms of reference: The award will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as a member of the Field Hockey team.

**Jim Forsythe Olympian Award**
Program code: UEAA-089
Value: $1000
Awarded: fall, spring
Terms of reference: To a student athlete in any sport who has aspirations to compete in the Olympics. The award will be given to a student in good standing who has shown leadership qualities. The student must submit an application in writing and present their training procedures to the Jim Forsythe Olympian committee by August 30th. This award may be held in conjunction with other awards made by Simon Fraser University or other agencies where permitted by those agencies.

**Kelly Franks Memorial Swimming Award**
Program code: UEAA-090
Value: $500
Awarded: fall, spring, summer
Terms of reference: To student or students on the SFU Swimming Team who are in good academic standing. Preference, when possible, will be given to at least one student who was or is active in the British Columbia summer Swimming Association (BCSSA), either as a participating athlete, coach or volunteer. Confirmation of this latter condition may be in writing by the student and/or SFU head swim coach. The recipient may be granted the Kelly Franks Memorial Swimming Award more than once provided criteria noted above are met.

**Frode Strand-Nielsen Award for International Students in Men's Soccer**
Program code: UEAA-116
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award(s) will be granted to international students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as members of the SFU Men's Soccer team. Academic accomplishments may be considered in selection of the recipient. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Recreational Services and Athletics.

**Rick Hansen Athletic Award**
Program code: UUAA-103
Value: $1400
Awarded: fall
Terms of reference: To a physically challenged student athlete who meets the general award requirements.

**Dr. T. Peter Harmon Wrestling Award**
Program code: UEAA-048
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award will be given to student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity wrestling team. Preference will be given to students with high academic standing.

**Robert F. Harrison & Partners Athletic Award**
Program code: UEAA-051
Value: $150
Awarded: fall, spring, summer
Terms of reference: The interest from the endowment will be given each year to an athlete upon the recommendation of the Director of Athletics.

**Wayne Holm Football Scholarship**
Program code: UEAA-023
Value: $750
Awarded: fall, spring, summer
Terms of reference: To students exhibiting exceptional ability in football and meeting the academic requirements.

**Daniel Igali Award in Wrestling**
Program code: UEAA-111
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award will be given to a student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a member of the SFU Wrestling Team. Academic performance may be considered in the selection of the recipient. The award will be made by the Senate Undergraduate Awards Adjudication Committee on Scholarships, Awards and Bursaries on the nomination of the Director, Recreational Services and Athletics.

**Indo-Canadian Wrestling Award**
Program code: UEAA-062
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a full or part-time student in good standing. The award is based on athletic merit in wrestling.

**Intramural Involvement Award**
Program code: UEAA-086
Value: $50
Awarded: fall, spring, summer
Terms of reference: To a full or part-time student in good standing who is attending Simon Fraser University and who volunteers within the Intramural Program.

**Mike Jones Wrestling Award**
Program code: UEAA-053
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a part-time or full-time student in good academic standing, based on athletic merit in the wrestling program.

**Rick Jones Memorial Award**
Program code: UEAA-007
Value: $500
Awarded: fall, spring, summer
Terms of reference: To one or more awards, are available to full-time students in good academic standing. These awards are based on outstanding athletic merit in wrestling. Preference will be given to a full-time student from Vancouver Island.

**Keg Restaurants Ltd Athletic Award**
Program code: UEAA-026
Value: $200
Awarded: fall, spring, summer
Terms of reference: An athlete who meets the academic requirements and demonstrates outstanding ability.

**Nick Kiniski Wrestling Award**
Program code: UEAA-059
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award is based on athletic merit in the Wrestling Program and will be awarded to a full-or part-time student in good standing who is a wrestler attending SFU.

**Jon-Lee Kootnekoff Basketball Award**
Program code: UEAA-029
Value: $900
Awarded: fall, spring, summer
Terms of reference: To a first year student on the Simon Fraser University men's basketball team. The award will be disbursed over two semesters, valued at approximately $450 per term.

**Labatt Breweries Award in Soccer**
Program code: UPAA-003
Value: $600
Awarded: spring
Terms of reference: Granted to one or more students exhibiting outstanding athletic merit in soccer and maintaining a satisfactory academic standing.

**Labatt Breweries of BC Limited Football Awards**
Program code: UEAA-008
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student who is registered full-time in a program of study in any faculty. The awards are based on outstanding ability in football, as well as proven academic achievement.

**The Leon J. Ladner Athletic Award**
Program code: UPAA-012
Value: $250
Awarded: fall, spring, summer
Terms of reference: Granted to a student in any faculty who demonstrates exceptional accomplishment or promise in active competitive sport at Simon Fraser University.

**Landmark Truss & Lumber Inc. Wrestling Award**
Program code: UPAA-020
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a full-time student who is in good academic standing in any faculty and is a member of the varsity Men's Wrestling team. High standards of leadership, athletic performance and academic accomplishment may be considered in selection of the recipient.

**Langford Women's Basketball Award**
Program code: UEAA-112
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a full-time student who is in good academic standing in any faculty and is a member of the varsity Women's Basketball team. Where possible, preference will be given to a student playing in the point guard position. The award will be disbursed by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Recreational Services and Athletics.

**Darryl "Lumpy" Lawrence Lucas Annual Award in Rugby**
Value: $1000
Program code: UPAA-052
Awarded: fall, spring, summer
Terms of reference: An annual award will be made to a SFU student who plays on the Simon Fraser University men's or women's rugby teams. The award will be granted to the player who best exemplifies sportsmanship and is in good academic standing. Sportsmanship will be defined as a player who assists in achieving goals, boosts team morale, strives for his...
or her personal best but may not receive the same
credit as the top player on the team. The award will be
made by the Senate Undergraduate Awards
Adjudication Committee on the nomination of the
Director, Recreational Services and Athletics.

McDonalds Restaurants Athletic Award
Program code: UEAA-027
Value: $250
Awarded: fall, spring, summer
Terms of reference: The interest from the endowment
will be given each year to an athlete upon the
recommendation of the Director of Athletics.

Ed McDougall Memorial/SFU Softball Alumni Award
Program code: UEAA-108
Value: $450
Awarded: fall, spring, summer
Terms of reference: The award will be given to
students in good academic standing in any faculty
who have demonstrated high standards of leadership
and performance as a member of the Varsity Softball
team. Accomplishment may be considered in
selection of the recipient.

Allison McNeill Award in Women’s Basketball
Program code: UEAA-107
Value: $250
Awarded: fall, spring, summer
Terms of reference: Awarded to a SFU student in
good academic standing who is a member of the SFU
Varsity Women’s Basketball team. The award will be
made by the Senate Undergraduate Awards
Adjudication Committee upon the nomination of the
Director, Recreational Services and Athletics.

Ronale Sanjay Naidu Foundation Award in Men’s Varsity Soccer
Program code: UPAA-053
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The award will be given to
students in good academic standing in any faculty
who have demonstrated high standards of leadership
and performance as a member of the Men’s Varsity
soccer team. Academic accomplishment may be
considered in selection of the recipient. The award will be
made by the Senate Undergraduate Awards
Adjudication Committee on the nomination of the
Director, Recreational Services and Athletics.

Paul Nemeth Wrestling Award
Program code: UEAA-030
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To student in good academic
standing in any faculty who has demonstrated high
standards of leadership and performance as a team
member of the varsity wrestling team. Preference will be
given to students with high academic standing.

David and Brenton Nichols Award in Athletics
Program code: UEAA-092
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student in good academic
standing in the Faculty of Business Administration or
School of Communications. The award will be granted
to 3rd and 4th year students participating in a
competitive sport at the provincial level or higher, or if
no such student is available, to a student who is a
member of a SFU Varsity team. Academic
performance may be considered in the selection of
recipient.

Jane Norman Memorial Soccer Award
Program code: UEAA-110
Value: $750
Awarded: fall, spring
Terms of reference: The award(s) will be granted to
students in good academic standing in any faculty
who have demonstrated high standards of leadership

and performance as member of the SFU Women’s Soccer Team. Academic accomplishment may be
considered in selection of the recipient.

The award will be made by the Senate Undergraduate Awards
Adjudication Committee on the nomination of the
Director, Recreational Services and Athletics.

Northern British Columbia Softball Award in Women’s Softball
Program code: UEAA-085
Value: $500
Awarded: spring
Terms of reference: To a SFU student who is a
member of the SFU Women’s Intercollegiate Softball
Team. The recipient must also have been a member
of one of the sponsoring associations for at least two
years, and as well, be in good standing with Softball
BC. The award may be renewed as long as the
recipient is a member of the SFU Intercollegiate
Softball Team. Preference will be given to applicants
from Northern BC, but the award may be granted to
other qualified applicants.

Lui Passaglia Football Award
Program code: UEAA-066
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student in any faculty who is
a member of the varsity SFU Swimming and Diving
team, exhibiting exceptional ability in swimming
and/or diving and is in good academic standing.

Murray Pezim Award in Football
Program code: UEAA-050
Value: $600
Awarded: fall
Terms of reference: To students in good academic
standing in any faculty who have demonstrated high
standards of leadership and performance as a
member of the Varsity Football team. Academic
accomplishment may be considered in selection of
the recipient.

Rae/Suart Alumni Athletic Award in Men’s Basketball
Program code: UEAA-014
Value: $750
Awarded: fall
Terms of reference: The award(s) will be given to a
student on the men’s basketball team upon
completion of their first year of academic studies at
Simon Fraser University.

Rae/Suart Alumni Athletic Award in Women’s Basketball
Program code: UEAA-049
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The award(s) will be given to a
student on the women’s basketball team upon
completion of their first year of academic studies at
Simon Fraser University.

Royal Canadian Legion Branch #2 Award
Program code: UEAA-054
Value: $50
Awarded: fall, spring, summer
Terms of reference: An annual award is available for a
student athlete who meets the academic
requirements and exhibits athletic ability.

Royal City Travel Limited Athletic Award
Program code: UEAA-099
Value: $200
Awarded: fall, spring, summer
Terms of reference: To athletically gifted students
involved in the University’s intercollegiate athletic
program. The endowment is established by Royal City
Travel in recognition of the outstanding achievement
of Terry Fox.

Scotiabank Award in Soccer
Program code: UPAA-008
Value: $2000
Awarded: fall, spring, summer
Terms of reference: The award will be disbursed in
two installments to an athlete on the soccer team at
SFU.

Scotiabank Student-Athlete Awards
Program code: UPAA-015
Value: $1000
Awarded: fall, spring, summer
Terms of reference: Outstanding athletic merit by a
student competing for SFU in any sport, and will be
awarded to full-time students with a 2.5 cumulative GPA.

Servipetrol Wrestling Award
Program code: UPAA-017
Value: $1500
Awarded: fall, spring, summer
Terms of reference: To a student who is on the SFU
Wrestling team. The recipient must be enrolled in
the appropriate number of credit hours for a
student-athlete, as defined by the university and must
have achieved a grade point average of 2.5 or greater
in the previous term of study or out of high school.

SFU Rugby Professional Women’s Award in Rugby
Program code: UPAA-022
Value: $500
Awarded: fall, spring, summer
Terms of reference: To students in good academic
standing in any Faculty who have demonstrated high
standards of leadership and performance as a
member of SFU Women’s Rugby team. Academic
accomplishment may be considered in selection of
the recipient. The award will be made by the Senate
Undergraduate Awards Adjudication Committee on
the nomination of the Director, Recreational Services
and Athletics.

Dr. Gordon Shrum Athletic Award
Program code: UEAA-037
Value: $800
Awarded: fall, spring, summer
Terms of reference: To an athlete who meets the
academic requirements and demonstrates
outstanding athletic ability.

Simon Fraser University Alumni Soccer Award
Program code: UEAA-063
Value: $900
Awarded: fall, spring
Terms of reference: To an undergraduate student
involved in the University soccer program.

SFU Athletic Award
Program code: UEAA-044
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award will be given to
undergraduate student athletes on a varsity team who
hold a satisfactory academic standing.
Simon Fraser University Swimming Alumni Award
Program code: UEAA-024
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To students who exhibit exceptional ability in swimming and meet the academic requirements.

Simon Fraser University "The Challenge" Golf Award
Program code: UPAA-010
Value: $2000
Awarded: fall, spring, summer
Terms of reference: To students who have demonstrated high standards of leadership and performance as a member of the varsity golf team. Academic accomplishments may be considered in selection of the recipient.

Bob Spray Rugby Awards
Program code: UEAA-025
Value: $500
Awarded: spring
Terms of reference: To rugby players enrolled at Simon Fraser University. This award is offered in recognition of significant contributions to the Simon Fraser University rugby team, or in recognition of excellence in extra-curricular rugby activities. Students must have achieved a minimum grade point average of 2.00 in the previous term during tenure of the award. Applications should be submitted to the Simon Fraser University rugby coach in the previous fall term.

Stan Stewardson Award in Men's Basketball
Program code: UEAA-109
Value: $500
Awarded: fall, spring, summer
Terms of reference: The award(s) will be granted to students in good academic standing who have demonstrated high standards of leadership and performance as members of the varsity basketball team. Academic accomplishment may be considered in selection of the recipient.

Vancouver Golf Club/MCL Motors Golf Tournament Award in Golf
Program code: UEAA-065
Value: $500
Awarded: fall, spring, summer
Terms of reference: To a student in good academic standing who is on the golf team at Simon Fraser University. The award will be granted to a full-time student in satisfactory academic standing.

Simon Fraser University Women's Softball Endowment Award
Program code: UEAA-064
Value: $100
Awarded: fall, spring, summer
Terms of reference: To students in good academic standing in any Faculty who have demonstrated high standards of leadership and performance as a member of the Varsity softball team. Academic accomplishment may be considered in selection of the recipient.

Student Athlete Support Award
Program code: UEAA-065
Value: $250
Awarded: fall, spring, summer
Terms of reference: To a student in good academic standing who is on the Simon Fraser University basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Team Skyline Ltd Athletic Award
Program code: UEAA-031
Value: $400
Awarded: fall, spring, summer
Terms of reference: To an athlete who exhibits outstanding athletic ability as well as maintaining satisfactory academic performance.

Brit Townsend Women's Track and Field Award
Program code: UEAA-083
Value: $600
Awarded: fall, spring, summer
Terms of reference: To a full-time student in good academic standing who is on the women's track and field team at Simon Fraser University. Based also on academic merit in track and field (preferably distance running).

Malcolm McInnes Track and Field Award
Program code: UFPA-014
Value: $2000
Awarded: fall, spring, summer
Terms of reference: To an SFU student who exhibits outstanding athletic merit on the SFU Track and Field team and who maintains a satisfactory academic standing. The award will be made to a full or part time student in good academic standing. Preference will be given to students who are members of the Valley Royals Track Club and Field Club. If a suitable candidate from the Valley Royals Club is not found in a given year, the award may be granted to a student on the SFU Track and Field team who is from the Fraser Valley region (Zone 3) that includes Maple Ridge, Langley, Abbotsford, Mission, Agassiz, Coquitlam, Port Coquitlam and Hope. If neither a Valley Royals Club member nor a student from Zone 3 is available, the award may be granted to a student who is on the Simon Fraser University basketball team.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.

Barbara J. Towriss Award in Women's Basketball
Program code: UEAA-039
Value: $1200
Awarded: fall, spring, summer
Terms of reference: To student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity women's basketball team. Academic accomplishment may be considered in selection of the recipient.
Water Polo Award
Program code: UEAA-082
Value: $250
Awarded: fall, spring, summer
Terms of reference: The award will be given to students in good academic standing in any faculty who have demonstrated high standards of leadership and performance as a member of the Simon Fraser Women’s Water Polo Club and/or the Simon Fraser Men’s Water Polo Club.

Lis Welch Aqu-a demi Award
Program code: UPAA-019
Value: $1000
Awarded: fall, spring, summer
Terms of reference: The Aqua-demic Award, sponsored by Liz Welch, will be granted to an SFU student, in good academic standing, who exhibits outstanding athletic ability on the SFU women’s swimming and diving team. The disbursement of award may be split between the fall and spring semesters.

West Coast Reduction Ltd Athletic Award
Program code: UEAA-038
Value: $600
Awarded: fall, spring, summer
Terms of reference: To a student athlete who exhibits exceptional ability in any intercollegiate sport and maintains a good academic standing.

White Rock Renegades Women’s Softball Award
Program code: UEAA-045
Value: $1000
Awarded: fall, spring, summer
Terms of reference: To a female student in good academic standing in any faculty who has demonstrated high standards of leadership and performance in a varsity sport offered through the University.

Work-Study Program
The SFU Work-Study program provides part-time on-campus jobs for full time students. To participate in this program, students must have a minimum CGPA of 2.0, and be a registered full-time student (minimum of 9.0 credit hours for undergraduate students, or be registered as a full time graduate student). Funding is limited and selection is based on the student’s level of need. Application forms are available through the Financial Aid and Awards office approximately six weeks prior to the start of the term. Application forms are available at Financial Aid and Awards in MBC 3200 and on our website http://students.sfu.ca/financialaid.

University Administered Loans
Student Emergency Loan Fund Regulations
The following regulations govern all loans for continuing students over which the University has jurisdiction.

• Short-term emergency funds are available to students who urgently need money while awaiting other sources of funding.
• Emergency loans are interest free for a period of 60 days.

• Students must have a demonstrated financial need and source of repayment.
• Undergraduate students must be registered in a minimum of nine credit hours of normal graded courses for term of application. Challenge, audit, and credit free courses will not be considered.
• Graduate students must be registered for residence credit in an approved full-time program.
• Students must apply on the Simon Fraser University Emergency Loan application form and be interviewed by a Financial Aid and Awards Advisor. It is the student's responsibility to supply all requested documentation. Incomplete applications may be rejected.
• SFU Emergency Loans are tenable only at Simon Fraser University and only for the term indicated on the notice.

Externally Administered Programs

Externally Administered Entrance Scholarships

External Entrance Scholarships for All Students
Association of Professional Engineers and Geoscientists of BC University Entrance Scholarships
Deadline: June 30
Terms of reference: APEGBC offers several entry scholarships to BC high school graduates entering engineering or geoscience programs at the University of British Columbia, University of Victoria or Simon Fraser University.
Contact: Association of Professional Engineers and Geoscientists of the Province of British Columbia, #200-4010 Regent Street, Burnaby BC, V5C 6N2. Tel: (604) 430-8035, Fax: (604) 430-8085. Email: apeginfo@apeg.bc.ca

Association of Universities and Colleges of Canada Awards
Deadline: June 1
Terms of reference: The Association of Universities and Colleges of Canada (AUCC) administers a number of entrance awards. Student may apply for many of the awards by virtue of their parent’s employment with the relevant donor companies. All awards are tenable for any recognized full-time degree course at any AUCC University or College. Candidates must be prepared to enter university in the year of competition.
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1. Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca Email: awards@aucc.ca

Irving K. Barber Scholarship
Terms of reference: The program will provide scholarships to BC undergraduate students who have completed two years at a BC public community college, university college, or institute and have completed the equivalent of two years of full-time studies transferable courses. They must be transferring, as a full-time student into their third year at a BC public post-secondary institution that provides the courses they require to complete their degree. These students must also demonstrate merit as well as exceptional involvement in their institution and community to qualify for this scholarship. Details of the program, including application guidelines and deadlines, will be announced on www.bcsap.bc.ca. Contact: Application forms are available through secondary schools in all provinces and CEGEPs in Quebec. Web: www.cmsf.ca

Terry Fox Humanitarian Award
Deadline: February 1
Terms of reference: The Terry Fox Humanitarian Award Program is intended to encourage Canadian youth to seek the high ideals represented by Terry Fox by granting of commemorative awards for the pursuit of higher education. The program provides scholarships to students entering or attending post secondary educational institutions within Canada. The successful applicants are recognized for dedication to community service, humanitarianism, perseverance and courage in the face of obstacles, and pursuit of excellence in fitness and academics. Award recipients must be Canadian citizens or have landed immigrant status. The value of the award is $7,000 annually, for a maximum of four years or until a first degree is obtained. For those who attend institutions that do not charge tuition fees, the award is $3,500 per year. Successful Terry Fox scholars are expected to participate in program activities such as volunteer service, yearly meeting and annual supports.
Contact: Terry Fox Humanitarian Award Program, Simon Fraser University, 8888 University Drive, Burnaby BC, V5A 1S6. Tel: (604) 291-3057, Fax: (604) 291-3311. Web: www.terryfox.org Email: terryfox@sfu.ca

Dr. L. M. Greene Scholarship
Deadline: May 27
Terms of reference: A scholarship in the amount of $500 and is awarded annually to a former Prince Rupert Senior Secondary School student who is interested in pursuing a vocation in any of the health care fields. Applications will normally be considered in May or June.
Contact: Prince Rupert Regional Hospital, 1305 Summit Avenue, Prince Rupert, BC, V8J 2A6. Tel: (250) 624-2171, Fax: (250) 624-2195.

Harry Bridges Entrance Scholarship (ILWU)
Deadline: June 30
Terms of reference: Four scholarships of $1500 each are offered to members, and sons and daughters of members, in good standing, of the International Longshore and Warehouse Union who are proceeding in the fall to a full first year program of studies at the University of British Columbia.

Simon Fraser University 2007 • 2008 Calendar
University of Victoria, Simon Fraser University, the BC Institute of Technology, or a regional college in BC.
Contact: Award #04718: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.
Web: www.students.ubc.ca/finance

William L. Hurford Memorial Scholarship (ILWU)
Deadline: June 30
Terms of reference: A scholarship of $1,200 is open to sons and daughters of members, in good standing of the International Longshore and Warehouse Union. It is awarded to a candidate who is proceeding in the fall to a full first year program of studies at the University of British Columbia, University of Victoria, Simon Fraser University, the BC Institute of Technology, or a regional college in British Columbia. Students may not hold more than one scholarship offered by the International Longshore and Warehouse Union at any one time.
Contact: Award #04786: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.
Web: www.students.ubc.ca/finance

Carol Anne Letheren Leadership and Sport Scholarship
Deadline: January 31
Terms of reference: The scholarship will support women who demonstrate the potential to reach Carol Anne Letheren’s vision and capabilities and who aspire to the same core Olympic values of excellence, leadership, respect, human development, fun, fairness, and peace. Candidates must be: a female student presently enrolled at a Canadian high school in their graduate year, be applying to a Canadian University in General Arts program with an emphasis in business, sport management, or marketing related fields, demonstrate qualities and personal values that personify the Olympic values of excellence, leadership, respect, human development, fun, fairness, and peace, have outstanding academic performance, minimum grade average of 85% or above, be an accomplished athlete in high school, community or provincial level competitive sports, be a Canadian citizen or permanent resident.
Contact: Canadian Olympic Association, 21 St. Clair Avenue East, Suite 900, Toronto ON, M4T 1L9, Tel: (416) 962-0299, Fax: (416) 967-4902.
Web: www.olympic.ca

Sergio Lovison Scholarship
Deadline: August 13
Terms of reference: Two scholarships of $750 each have been set up in Sergio’s name, to commemorate his indomitable spirit, which has touched so many lives. Applicants must be Roman Catholic residents of British Columbia, V6P 3J6.
Contact: Sergio Lovison Foundation, c/o 5576 Argyle Street, Vancouver BC, V5P 3J6.

Navy League of Canada University Entrance Scholarship Program
Deadline: August 15
Terms of reference: The Navy League of Canada in co-operation with the Royal Canadian Navy Benevolent Fund award scholarships to serving and former Royal Canadian Sea Cadets entering their first year to University Course leading to a degree, Community College or Technical Institute leading to a diploma, and must be an active serving cadet at the time of application.
Contact: The National League of Canada, 305 Rideau Street, Ottawa ON K1N 9E5, Toll-Free: 1-800-385-6289, Fax: (613) 990-8701.
Web: www.navyleague.ca

Piping Industry Journeyman Training and Industry Promotion Fund Scholarship
Deadline: June 30
Terms of reference: Two scholarships of $500 each are offered to students entering the first year at any British Columbia university or college, and proceeding to a full program of studies leading to a university degree or college diploma in any field. To be eligible, a candidate must be (a) the son, daughter or legal dependent of a member of the United Association of Plumbers and Steam-fitters, Local 170, who is employed by a firm which is a contributor to the Fund, or (b) the son, daughter or legal dependent of an employee of a firm who is a contributor to the fund.
Contact: Award #04731: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.
Web: www.students.ubc.ca/finance

Retail Wholesale Union, Local 517, Scholarship
Deadline: June 30
Terms of reference: A scholarship of $250 is offered to dependants or legal wards of members of Local 517. It is open in competition to applicants who are proceeding from grade 12 to any accredited University or college in BC, in a full program leading to a degree or diploma. Should there be a tie, the financial need of the applicant and his/her family shall be the deciding factor.
Contact: Award #04779: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

Father Emmanuele Rosaia Scholarship
Deadline: August 25
Terms of reference: A scholarship in the name of Father Emmanuele Rosaia has been set up by the Italian Cultural Centre Society to pay tribute to this special man whose charitable Franciscan spirit has helped and cheered many a soul. Two scholarships of $1,000 each will be awarded. Selection criteria: 
- Applicants must be residents of the Lower Mainland
- Applicants must be Roman Catholic and of Italian-Canadian origin.
- Applicants must be grade 12 students who expect to graduate with a 3.0 (B) grade point average or higher.
- Students must be enrolled in an accredited high school or college.
- Students must be in good standing of the United Association of Plumbers & Steamfitters, Local 170.
Contact: Award #04798: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.
Web: www.students.ubc.ca/finance

External Administrated Scholarships for Continuing Students
The following scholarships are not administered by Simon Fraser University. The information is intended for general reference only; it may be subject to change. The student is responsible for enquiring and applying through the appropriate agency as indicated in the description.

External Scholarships for All Students
Aboriginal Veterans’ Scholarship Trust Fund
Deadline: unknown
Terms of reference: The Aboriginal Veterans’ Memorial Scholarship Trust Fund is available to all Aboriginal post-secondary students, including status and non-status Indians, Inuit and Metis. Preference may be given to descendants of Aboriginal veterans. Students must be enrolled in recognized Canadian post-secondary educational institutions, including technical institutes, colleges, CEGEPs and universities. Preference may be given to full-time students. Priority will be given to students in the business and sciences curricula.
Contact: The Aboriginal Veterans’ Memorial Scholarship Trust Committee, c/o St. Francis of Assissi Parish, 305 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745. Or call toll-free 1-800-308-8306.
Email: awards@aucc.ca

Toyota Earth Day Scholarship
Deadline: January 31
Terms of reference: The Toyota Earth Day Scholarship is now available to graduating high school students and Quebec junior college students who have achieved academic excellence and distinguished themselves in environmental community service. Please visit website for detailed program information and applications.
Contact: Toyota Earth Day Scholarship Program, 111 Peter Street, Suite 503, Toronto ON, M5V 2H1.
Web: www.earthday.ca/scholarship

United Association of Plumbers & Steamfitters, Local 170 Scholarship
Deadline: June 30
Terms of reference: Two scholarships of $1,000 each are offered to students entering first year at any public university in British Columbia. A candidate must be the son, daughter or legal dependent of a member in good standing of the United Association of Plumbers & Steamfitters, Local 170.
Contact: Award #04798: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.
Web: www.students.ubc.ca/finance
Applicants must demonstrate sensitivity to the cultural and linguistic traditions of Native people. The committee will consider such criteria as the student’s extra-curricular activities within Native organizations, personal research and the nature of studies being pursued.

Contact: Chair; SFU Engineering Steering Committee, 3555 University Blvd., Kelowna BC, V1V 1V1.

**BC Hydro Scholarships**

**Deadline:** March 31

Terms of reference: Candidates must submit a completed application form, current official transcript, reference letter from a teacher or faculty member, a resume and a letter describing why you are a good candidate for the scholarship. Submit a separate application for each category in which candidates wish to be considered.

POWER SMART: Available to BC students who have completed an energy efficiency or conservation project/paper for school and who are currently enrolled in a public post-secondary institution or who are in Grade 12 and will be pursuing a public post-secondary education. A summary (maximum of 300 words) must be included with the application.

L’ECOLE POLYTECHNIQUE MEMORIAL FUND: To BC female students at any BC university, technical school or college or who are in grade 12 and will be pursuing a public post-secondary education in any engineering or technical program.

ABORIGINAL: To individuals who are status/non-status Indians, Inuit or Metis and are residents of BC, and who plan to enroll in a public post-secondary institution or who are attending a public post-secondary institution in any field of study. BC HYDRO / APEGBC SCHOLARSHIP: Available to third-year university students currently enrolled in a full-time engineering and geoscience program in B.C. A summary essay (maximum of 300 words) must be included with the application describing a project or paper for energy conservation that you have completed.

Contact: BC Hydro, Outreach Programs, 16th Floor, 333 Dunsmuir Street, Vancouver BC, V6B 5R3, Tel: (604) 623-3994.

Web: www.bchydro.com/scholarships

**BC Paralegic Foundation Scholarships/Bursaries**

**Deadline:** July 31

Terms of reference: Each year the BC Paralegic Foundation gives out a number of scholarships and bursaries to needy students with disabilities attending post secondary institutes in British Columbia. The awards are available to members of the BC Paralegic Association who have a physical disability and will be awarded on academic standing, merit and the basis of financial need. Recipients must be residents of British Columbia, Canadian Citizens, or Landed Immigrants.

Contact: Scholarship and Bursary Awards Committee, c/o BC Paralegic Association, 780 SW Marine Drive, Vancouver BC, V6P 5Y7, Tel: (604) 324-3611, Fax: (604) 324-3671.

J. Armand Bombardier International Fellowships (CBIE)

**Deadline:** March 1

Terms of reference: Fellowships are offered to Canadians to study, research and work abroad in order to build their international competence and to enhance Canada’s participation in the world economy of the third millennium. The fellowships are open to all Canadians, and to students in Grade 12 and will be pursuing a public post-secondary education in any field of study. A summary essay (maximum of 300 words) must be available with the application describing a project or paper for school and who are currently enrolled in a public post-secondary institution.

Contact: J. Armand Bombardier International Fellowships, CBIE, 510 University Ave., Ottawa, ON, K1N 6B9, Tel: (613) 237-4820 ext. 234, Fax: (613) 237-1073.

Web: www.cbie.ca

Email: SMelanson@cbie.ca

**W. Norman Burgess Scholarship**

**Deadline:** July 15

Terms of reference: The scholarship is available to a university student proceeding to a university degree, who is now at the first year level or higher. Preference will be given to applicants from central Vancouver Island. Applications should include a transcript and a letter describing the student’s field of study, aims, activities associated with the field of study and extracurricular activities.

Contact: Burgess Scholarship, Royal Canadian Legion Branch 211, Box 35, Bowser BC, V0R 1G0.

**Canada-Taiwan Student Exchange Program**

**Deadline:** April 9

Terms of reference: The Canada-Taiwan Student Exchange Program is a scholarship program sponsored by the Department of Human Resources Development Canada. This program is aimed at providing opportunities for undergraduate Canadian students to study at participating Taiwanese universities, and for undergraduate students from Taiwan to study at participating Canadian universities. All field of study, except medicine, are eligible. The applicant must be nominated by his/her institution. In no case will accept directly from students.

Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (UACC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.

Web: www.uacc.ca

Email: ggallagh@uacc.ca

**Canadian Federation of University Women**

**Parksville/Qualicum - The James Craig Reid Memorial Scholarship**

**Deadline:** June 1

Terms of reference: To be awarded annually to a male or female student who must have graduated from a secondary school in District 69 (the Parksville/Qualicum area) or have lived in the area for at least three years. Candidates should be entering their 4th year of study in a university academic program. Preference shall be given to candidates in the Faculty of Music, Fine Arts or Liberal Arts. Successful candidates will be offered summer employment at one of Inco’s Canadian facilities. Applicants must be studying in a field of engineering that relates directly to mining and metallurgy. Winners must identify the broad range of engineering disciplines that thrive in that industry and outline how cutting-edge technology and creativity has become an industry hallmark.

Contact: The Canadian Engineering Memorial Foundation, The Claudette Mackay-Lassonde Scholarship Award, P.O. Box 370, Renfrew ON, K7V 4A6, Tel: 1-866-883-2363.

Web: www.cfemt.ca

Email: info@cfemt.ca

**Canadian Hard of Hearing Association Scholarship**

**Deadline:** fall

Terms of reference: The purpose of the scholarship program is to offer financial assistance and recognition to hard of hearing students registered in full time program at a recognized Canadian college or university, in any area of study.
Terms of reference: The scholarship will be awarded to a student who is enrolled in a graduate degree program; a Canadian studying at a university in Canada and engaged in research that will assist the protection of minority or human rights in Canada. Contact: Mennonite Central Committee Canada, Attn: Canadian Japanese-Mennonite Scholarship, 134 Plaza Drive, Winnipeg MB, R3T 5K9, Tel: (204) 261-6381, Fax: (204) 269-9875.

Web: www.mcc.org
Email: canada@mennonitecc.ca

Canadian Northern Studies Polar Commission Scholarship - Canadian Northern Trust
Deadline: January 15
Terms of reference: This award will be offered to students enrolled in a doctoral program at a Canadian university and engaged in interdisciplinary studies and research. Proposals are invited from students who (a) will engage in research culminating in a thesis or other such document, (b) whose programs show excellence in research in polar regions and (c) are willing to communicate results in a major national or Northern forum. Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.

Web: www.acuns.ca

Canadian Printing Industries Scholarship Trust Fund
Deadline: unknown
Terms of reference: The amount of each scholarship is $1000 per year. Students must be enrolled for a minimum of two years, on a full time basis, in an approved program (not design or art) in a Canadian school. The eligibility of any program and institution is at the discretion of the board of trustees of the scholarship fund, whose decision is final. Applicants must maintain a B average or better and must have an interest in pursuing a career in the printing industry (this includes pre-press, press, sales, management, estimating, etc.) Contact: Canadian Printing Industries Scholarship Trust Fund, c/o Canadian Printing Industries Association, 75 Albert Street, Suite 906, Ottawa ON, K1P 8E7, Tel: 1-800-267-7280.

Web: www.cpi.ca

Canadian Sanitation Supply Association Scholarship Program
Deadline: June 1
Terms of reference: Scholarships will be awarded to Canadian students attending college or university in Canada who have achieved a high level of academic and leadership standards over the years. The selection committee’s decision will be based on academic and social achievement as well as the quality of the essay. Contact: Canadian Sanitation Supply Association, 300 Mill Road, #3-10, Etobicoke ON, M9C 4W7, Tel: (416) 620-9320, Fax: (416) 620-7199. Toll Free: 1-800-561-1359.

Web: www.cssa.com
Email: cssa@cssa.ca

Canadian Water Resources Association
Deadline: February 15
Terms of reference: Four scholarships are offered to graduate students whose programs of study focus upon applied, natural, or social science aspects of water resources. All applicants will receive a one-year membership in the Canadian Water Resources Association. The scholarships are open either to Canadian citizens or landed immigrants who are full-time graduate students, in any discipline or profession, attending a Canadian university or college. Application Requirements: • A 500-word statement which outlines the student’s research project and its relevance to sustainable water resources. This statement should focus on the research methods of the project. • Course transcripts at the undergraduate and graduate level. • Two references, to be sent directly to the scholarship committee by the referees or appropriate official of the university or college. • A statement from the program chairman or director endorsing the application from that program. The endorsement is not a letter of reference and must be attached to the application form. • The completed application form.

Contact: Chairman, CWRA Scholarship Committee, Canadian Water Resources Association, Membership Services, 400 Clyde Road, PO Box 1329, Cambridge ON, N1R 7G6, Tel: (519) 622-4784, Fax: (519) 621-4844.

Web: www.cwra.org

Canadian Wireless Telecommunications Association (CWTA) Graduate Scholarship
Deadline: June 15
Terms of reference: The CWTA, together with five of Canada’s wireless telephone carriers - Bell Mobility, Clearnet Communications, Microcell Telecommunications, Rogers AT& T Wireless and TelUS Mobility - have established a scholarship fund to benefit students at the master or PhD level whose primary field of study is related to wireless telecommunications including, but not limited to, engineering or business. Candidates must be a Canadian citizens or permanent residents of Canada and enrolled or planning to enrol in a graduate degree program at a university in Canada, and must intend to use the scholarship to assist them to study in disciplines related to wireless telecommunications. Awards are granted on the basis of academic standing and demonstrated potential for advanced study and research. Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.

Web: www.aucc.ca
Email: awards@aucc.ca

Harold Arvid Christenson Memorial Scholarship Fund
Deadline: September 1
Terms of reference: The late Harold Arvid Christenson, former manager of Pacific Coast Fishermen’s Mutual Marine Insurance Company, bequeathed scholarships for sons, daughters or legal wards of past or present members and employees of the company. Applicants must be enrolled full-time at a post-secondary educational institution. The number and amount of these scholarships will be determined by the board of directors of the company. Contact: Pacific Coast Fishermen’s Mutual Marine Insurance Company, Suite 200-4259 Canada Way, Burnaby BC, V5A 4X5, Tel: (604) 438-4240, Fax: (604) 438-5756.

Web: www.mutualmarine.bc.ca
Email: info@mutualmarine.bc.ca

Coast Capital Savings Community Education Awards
Deadline: March 10
Terms of reference: The awards are available for members of Coast Capital Savings who are registered in a post-secondary program or planning to register within the year. Selection is based on community service, school activities, leadership and academic performance. Special circumstances will also be considered. Contact: Coast Capital Savings Credit Union, Chair, Education Awards Committee, #400-645 Tyee Road, Victoria BC, V8A 6X5, Tel: (250) 483-7000 (Greater Victoria), (604) 517-7000 (Lower Mainland), Toll-Free: 1-888-517-7000.

Web: www.coastcapitalsavings.com

Dental Laboratory Technician Program Entrance Scholarship (Vancouver Community College)
Terms of reference: A $1500 scholarship will be awarded to the eligible applicant who has achieved the highest score in the Vancouver Community College Dental Laboratory Technician Program’s selection process. Applicants must be graduates of an accredited university or a three-year program at an accredited art college. Contact: Vancouver Community College (City Centre Campus), 250 West Pender Street, Vancouver BC, V6E 1S9, Tel: (604) 874-7178.

Embassy of Italy Scholarships
Deadline: April 22
Terms of reference: The Government of Italy offers scholarships to Canadian citizens wishing to pursue studies in Italy. They are intended for students, professionals, teachers, and artists who meet the necessary requirements for enrolment in Italian Post-Secondary institutions (universities, academies, conservatories, art restoration institutes, National school of Cinematography, research centres or laboratories, libraries, archives, museums or other national or nationally-recognized institutions), and who would like to attend specialized courses or conduct research in specific fields. There are the short-term scholarships (1–9 months) and the long-term scholarship (9–20 months). Applicants must be 35 years of age or younger. Contact: Embassy of Italy, Cultural Office, Suite 2100-275 Slater Street, Ottawa Ontario, K1P 5H9.

Italian Cultural Institute in Vancouver (604) 688-1809; Italian Consulate in Vancouver (604) 684-7288.

Web: www.italyincanada.com

Envision Credit Union Education Award Education Award
Deadline: April 1
Terms of reference: Education awards are available to students who are members of Envision Credit Union. Selection will be made on the basis of a completed application form and community and/or school involvement. Contact: Envision Education Award, 6470 - 201 Street, Langley BC, V2Y 2X4, Tel: (604) 539-7300, Fax: (604) 539-7315.

Web: envisionfinancial.ca

The Epilepsy Scholarship Awards
Terms of reference: The scholarship program is open to all young people between the ages of 16 to 29, who are under the care of a Canadian physician for the treatment of epilepsy. Contact: B.C. Epilepsy Society, Tel: (604) 875-6704, Toll-free: 1-866-374-5377.

Web: www.epilepsy.ca
Email: epilepsy@epilepsy.ca

Orville Erickson Memorial Scholarship Fund
Deadline: May 25
Terms of reference: The purpose of the fund is to provide financial assistance to students pursuing higher education in the field of wildlife and conservation. Eligible applicants must be competent, full-time students registered in a recognized Canadian educational institute and be citizens of...
Canada, or landed immigrants, with the intention of working in Canada. All applicants must be in need of financial assistance to pursue their course of study. Applications may be made for a summer or other sessions.

Web: www.cwf-fct.org
Contact: Orville Erickson Memorial Scholarship, c/o Secretary Canadian Wildlife Foundation, 350 Michael Cowpland Drive, Kanata, ON K2M 2W1.

Fairfax Financial Holdings Limited Scholarship Program
Deadline: June 1

Terms of reference: This program is offering up to sixty scholarships, 36 at the university level and 24 at the college level. Students enrolled in an undergraduate university program will receive $5000 and students pursuing a college diploma will receive $3500. Candidates must be Canadian citizens or permanent residents. They must be completing the first year of a university degree program or college technical diploma program and be in need of financial assistance. They must also be enrolled on a full-time basis, as defined by their educational institution, and have attained high academic standing. Each institution may nominate only one candidate.

Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca

Fessenhen-Trott Awards Program
Deadline: June 1

Terms of reference: This award is available to undergraduate students who are completing the first year of a first university degree program and have attained high academic standing. Candidates must be Canadian citizens or permanent residents of Canada. Applications are by nomination only.

Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca

Isabel Loucks Foster Public Health Scholarship Fund
Deadline: September 9

Terms of reference: Candidates must be full-time students engaged in postgraduate study in a field of Public/Community Health Practice within an applicable discipline (e.g. nurses, nutritionists, environmental health officers, etc.). Candidates must be ordinarily resident and practising in B.C., who demonstrate a commitment to remain in B.C., must have demonstrated excellence in performance and leadership ability and studies may be undertaken at any suitable educational institution either within or outside British Columbia. Applications must be accompanied by a current CV, proof of acceptance or enrollment in an appropriate program, future goals and intentions within public/community health and any other relevant information.

Contact: Health Officers’ Council of British Columbia, 14265 - 56th Avenue, Surrey, BC V3X 3A4.
Web: www.vancouverfoundation.bc.ca/Community/Public%20health.shtml

Terry Fox Humanitarian Award
Deadline: February 1

Terms of reference: The Terry Fox Humanitarian Award Program is intended to encourage Canadian youth to seek the high ideals represented by Terry Fox by granting commemorative awards for the pursuit of higher education. The program provides scholarships to students entering or attending post-secondary educational institutions within Canada.

The successful applicants are recognized for dedication to community service, humanitarisman, perseverance and courage in the face of obstacles, and pursuit of excellence in fitness and academics. Award recipients must be Canadian citizens or have landed immigrant status. The value of the award is $7,000 annually, for a maximum of four years or until first degree is obtained. For those who attend institutions that do not charge tuition fees, the award is $3,500 per year. Successful Terry Fox scholars are expected to participate in Program activities such as volunteer service, yearly meeting and annual reports.

Contact: Terry Fox Humanitarian Award Program, Simon Fraser University, 8888 University Drive, Burnaby BC, V5A 156, Tel: (604) 291-3057, Fax: (604) 291-3311.
Web: www.terryfox.org
Email: terryfox@sfu.ca

G & F Financial Group Scholarship
Deadline: June 30

Terms of reference: Two scholarships are offered to students at the University of British Columbia, Simon Fraser University, University of Victoria, BC Institute of Technology or a BC college. Applicants must be active members or immediate family of an active member of the Credit Union.

Contact: Award #04707: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 852-6929.

Geomatics Canada Scholarship Program - Canadian Institute of Geomatics
Deadline: March 1

Terms of reference: The Geomatics Canada Scholarship Program has been created to assist in furthering the education and training of students in the field of Geomatics. Application for the scholarship is restricted to students that are in good standing, registered full time in a recognized university, technical institute or community college in Canada and who are either Canadian citizens or who have achieved landed immigrant status.

Contact: The Chair, Geomatics Canada Scholarship Program, c/o Canadian Institute of Geomatics, Suite 400, 1390 Price of Wales Dr., Ottawa ON K2C 3N6, Tel: (613) 224-9851, Fax: (613) 224-9777.
Web: www.cig-ascg.ca

The Keith Gilmore Foundation
Deadline: July 1

Terms of reference: The Foundation was established to provide scholarships to worthy applicants taking secondary education in the fields of agriculture and journalism and for those schools that agricultural journalism. There is one $2,000 scholarship offered to an individual in a post graduate degree program in agriculture, journalism or communications at a recognized university. There are five $1,500 scholarships offered to individuals in an undergraduate degree program in agriculture, journalism or communications at a recognized university. There are four $750 scholarships offered to individuals in a recognized diploma program in agriculture and/or journalism or communications. The successful applicant will have already completed a minimum of one year in his or her major field of studies.

Contact: The Keith Gilmore Foundation, 5160 Skyline Way, N.E., Calgary AB, T2E 6V1, Tel: (403) 275-2662, Fax: (403) 295-1333.
Web: www.hereford.ca
Email: herefords@hereford.ca

Global Television Network Scholarship - Internship Award for a Canadian with a Physical Disability
Deadline: June 3

Terms of reference: This annual scholarship-internship award is offered to a Canadian student with a mobility impairment, and provides educational assistance as well as a challenging opportunity to work in private television, in pursuit of a career in broadcasting. The award, valued at about $15,000, covers all tuition fees and textbooks, for one full scholastic year of a radio and television arts program or journalism program at a recognized Canadian university or college, in the fall. The award also includes a three or four month Internship at any one of the Global Television stations for the summer, and moving expenses associated with the Internship.

Eligibility criteria:
• Canadian student with a mobility impairment,
• Secondary school graduate with a grade average suitable for admission to a radio and television arts or journalism program at a recognized Canadian university or college; or a mature student eligible for admission to a radio and television arts or journalism program at a recognized Canadian university or college,
• Strong English language communications skills.
Contact: Global Television Network, 81 Barber Greene Road, Toronto ON, M3C 2A2, Tel: 1-800-387-8001, Fax: (416) 442-3377.
Web: www.canada.com

Golden Key Scholarships and Awards
Deadline: unknown

Terms of reference: Golden Key National Honour Society is committed to the cause of recognizing and encouraging academic excellence. To recognize members’ accomplishments, scholarships and awards are provided to deserving Golden Key members. Visit Golden Key website for detailed information.
Contact: Scholarship Program, Administrators, Golden Key Scholarships’ Awards, P.O. Box 23737, Nashville TN 37202-3737, USA.
Web: www.goldenkey.org

Government Finance Officers Association - Daniel B. Goldberg Scholarship for Public Finance Graduate Students
Deadline: February 3

Terms of reference: The GFOA's Daniel B. Goldberg Scholarship of $5,000 will be awarded to a student enrolled in a full-time master's program preparing for a career in state and local government finance. The candidate must hold a baccalaureate degree or its equivalent and be a citizen or permanent resident of
the U.S. or Canada. Recommendation from student's academic advisor or dean of the graduate program is required. The winner of the scholarship will be invited, at GFOA expense, to attend the GFOA annual conference, where the award is presented.

Contact: Scholarship Committee, Government Finance Officers Association, 203 North LaSalle Street, Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700.

Web: www.gfoa.org

Government Finance Officers Association - George A. Nielsen Public Investor Scholarship

Deadline: February 3

Terms of reference: The GFOA's George A. Nielsen Public Investor Scholarship of $5,000 will be awarded (may be awarded as two $2,500 scholarships) to an undergraduate or graduate student in public administration, finance, business administration or a related field. The candidate must be employed at least one year by a state, local, government or other public entity and must be a citizen or permanent resident of the U.S. or Canada. Recommendation by employer is required.

Contact: Scholarship Committee, Government Finance Officers Association, 203 North LaSalle Street, Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700.

Web: www.gfoa.org

Government Finance Officers Association - Public Employee Retirement Research and Administration Scholarship

Deadline: February 3

Terms of reference: The GFOA's Public Employee Retirement Research and Administration Scholarship of $4,000 is available to a full-time undergraduate or graduate student enrolled in a graduate program in public administration, finance, business administration or social sciences. Student must have an intent to pursue a career in state or local government with a focus on public sector retirement benefits, and must hold a baccalaureate degree or its equivalent. Must be a citizen or permanent resident of the US or Canada. Recommendation from the student’s academic advisor or dean of the graduate program required.

Contact: Scholarship Committee, Government Finance Officers Association, 203 North LaSalle Street, Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700.

Web: www.gfoa.org

John Gyles Education Awards

Deadline: June 1

Terms of reference: The John Gyles Education Awards are available to students in both Canada and the United States. Full Canadian or American citizenship is a requirement. Awards are available to male and female students for all areas of post-secondary study. A minimum of 2.7 is required. Criteria other than strictly academic ability and financial need are considered in the selection process. Students can receive an application by sending a stamped self-addressed envelope.

Contact: The John Gyles Education Fund, Attention: The Secretary, P.O. Box 4808, Station A, Fredericton NB, E3B 5G4, Tel: (506) 459-7460.

Web: www.johngieseducationcenter.com

John & Lois Lamont Graduate Scholarship - Planned Parenthood Federation of Canada

Deadline: April 30

Terms of reference: The scholarship is open to Canadian citizens or landed immigrants who are graduates of any recognized university, possess an Honours degree or its equivalent and intend to pursue a higher degree in the field of sexual and reproductive health. This could include disciplines such as biology, Canadian studies, education, history, law, medicine, political science, psychology, international studies, social work, sociology and women's studies. The application must include a transcript, resume, a 500-700 word typed essay, outlining relevant education, background in sexual and reproductive health and/or women's issues, aspirations, and plans and two reference letters.

Contact: John and Lois Lamont Graduate Scholarship Committee, Planned Parenthood Federation of Canada, 430 - 1 Nicholas Street, Ottawa ON, K1N 7B7, Tel: (613) 241-4474, Fax: (613) 241-7550.

Web: www.ppcf.ca

Phyllis P. Harris Scholarship - Planned Parenthood Federation of Canada

Deadline: April 29

Terms of reference: The scholarship is for full-time undergraduate students in third or fourth year level at a Canadian University. Applicant must also be a Canadian citizen or landed immigrant. All applicants must have previous work or volunteer experience in the general field of human sexuality with the intent to pursue a degree in the field of family planning or population issues. The field is broadly defined to include biology, education, history, medicine, political science, psychology, international studies, social work or sociology. The application must include a transcript, a 500 word typed essay, outlining relevant background education, objectives and plans for the future and two reference letters.

Contact: Phyllis P. Harris Scholarship Committee, Planned Parenthood Federation of Canada, 430 - 1 Nicholas Street, Ottawa ON, K1N 7B7, Tel: (613) 241-4474, Fax: (613) 241-7550.

Web: www.ppcf.ca

Harry Bridges Undergraduate Scholarship (ILWU)

Deadline: June 30

Terms of reference: Three scholarships of $1,500 each are offered to members, and sons and daughters of members, in good standing of the International Longshore and Warehouse Union in attendance at the University of BC, the University of Victoria, Simon Fraser University, BC Institute of Technology or any college in BC who will continue in a full program of studies in the next session. Contact: Award #00530: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

Web: www.students.ubc.ca/finance

Thomas P. Mayes Scholarship (ILWU)

Deadline: June 30

Terms of reference: An undergraduate scholarship of $1,500 is offered to members, and sons and daughters of members, in good standing. Candidates may attend the University of BC, the University of Victoria, Simon Fraser University, BC Institute of Technology or any college in BC and must enroll in a full program of studies.

Contact: Award #00558: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

Web: www.students.ubc.ca/finance

Ralph Scruton Memorial Scholarship (ILWU Local 506)

Deadline: June 30

Terms of reference: A $570 scholarship is available to members of the union in good standing and their sons and daughters. Candidates may attend the University of BC, the University of Victoria, Simon Fraser University, BC Institute of Technology or any college in BC and must enroll in a full program of studies.

Contact: Award #00666: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

Web: www.students.ubc.ca/finance

Bud Smith Scholarship (ILWU Local 517)

Deadline: June 30

Terms of reference: A $500 scholarship is open to members in good standing of Local 517, and their sons and daughters. Candidates may attend the University of BC, the University of Victoria, Simon Fraser University, BCIT or any college in BC and must enroll in a full program of undergraduate studies.

Contact: Award #04804: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

Web: www.students.ubc.ca/finance

Interior Logging Association Scholarship

Deadline: July 31

Terms of reference: There are several scholarships available for $1,000 to students enrolling in a full-time forestry related discipline; in any discipline who are immediate relatives of the Interior Logging Association; who are enrolling in a Trades School, in a Business Administration discipline.

Contact: Interior Logging Association, 3204 - 39th Avenue, Vernon, BC V1T 3C8, Tel: (250) 503-2199, Fax: (250) 503-2250.

Web: www.interiorlogging.org

Email: info@interiorlogging.org

Japanese Government (Mext) Scholarship

Deadline: June 10

Terms of reference: The Mombusho (Ministry of Education, Science, Sports and Culture, Government of Japan) offers scholarships to foreign students who wish to study at Japanese universities as undergraduate students under the Japanese Government Scholarship Program. As well the Mombusho offers scholarships to foreign students who wish to study at Japanese universities as research students under the scholarship program. The Undergraduate Studies is a five year program of study at a Japanese university. It includes one year of Japanese language training and four years of undergraduate study. When completed, the student can obtain a bachelor’s degree. The Research Studies is for graduate students. The length of this scholarship is one and a half or two years.

Contact: MEXT Scholarship Program, The Consulate General of Japan, 900-1177 West Hastings St., Vancouver BC, V6E 2K9, Tel: (604) 684-5868, ext. 370, Fax: (604) 684-6939.

Web: www.vancouver.ca.emb-japan.go.jp

Harry Jerome Awards

Deadline: May 30

Terms of reference: The purpose of the awards is to recognize and honour excellence in achievement in the African Canadian community. Visit website for the application form and details.

Contact: The Harry Jerome Scholarship Fund, The Black Business and Professional Association, 675 King Street West, Suite 210, Toronto ON, M5V 1M9, Tel: (416) 504-4097, Fax: (416) 504-7343.

Web: www.bbp.ca

Email: scholarships@bbp.ca

Jewish Women International of British Columbia Scholarship

Deadline: June 30

Terms of reference: Two scholarships of $500 each are offered to members of the Hillel or sons and daughters of members of Jewish Women International of Canada. Students must have successfully completed at least one year at Simon Fraser University, University of British Columbia or Vancouver Community College (Langara) by June 30 and must be continuing studies at any of the three...
Terminology and University

Application must be accompanied by a transcript of all post-secondary studies completed. Contact: Award #00577: Apply at University of British Columbia, Student Financial Assistance and Awards, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 822-5111, Fax: (604) 822-6929.

KPMG First Nations and Aboriginal Student Awards

Deadline: May 20

Terms of reference: The program is available to encourage and assist First Nations and Aboriginal students in the pursuit of post-secondary education in the fields of business, economics, political science, law or First Nation financial administration. Candidates must be a Canadian citizen, a Status Indian, non-status Indian, Inuit or Metis, a full student who is currently enrolled in or has been accepted to a university or a community college.

Contact: KPMG Student Awards Co-ordinator, KPMG LLP, Marsland Centre, 20 Erb Street West, Waterloo ON, N2L 1T2

Web: www.kpmg.ca

Laidlaw Foundation Children and Youth, Aboriginal and Black Scholars Programs

Deadline: February 1

Terms of reference: The foundation will assist university students from First Nations and black communities who have demonstrated academic and leadership qualities in areas related to the Foundation’s Children at Risk Program. Eligible students are full-time students registered in a degree program at a Canadian university who are interested in the processes that contribute to the creation and maintenance of conditions that diminish the life quality and life chances of children. Eligible candidates must be nominated by community leaders, employers or faculty.

Undergraduate Awards: First Nations students enrolled in a third or fourth year undergraduate program at a Canadian university may apply for a limited number of awards of up to $2,000 each for research relating to the Children at Risk Program. First Nations students enrolled in an undergraduate program at a Canadian university leading to a professional degree in a field related to the Children at Risk Program may also apply for an award of up to $500.

Transitional Year Programs: Promising First Nations students accepted into an undergraduate or graduate transitional year program at a Canadian university may apply for a Laidlaw Scholarship (up to $500 if enrolled in a transitional year program leading to a graduate degree). Applicants must indicate a course of study related to the Foundations’ Children at Risk Program.

Contact: Nathan Gilbert, Executive Director, Laidlaw Foundation, 950 Yonge St., Toronto ON, M4W 2J4, Tel: (416) 975-3614, Fax: (416) 975-1428.

Web: www.laidlawfdn.org

The Law Foundation of Newfoundland Scholarship

Deadline: May 1

Terms of reference: The Law Foundation of Newfoundland awards up to three annual law school entrance scholarships, each valued at $5,000 each, tenable at a recognized Canadian law school. Successful applicants must be residents of the province of Newfoundland, have achieved academic excellence and not be the recipient of any other major scholarship.

Contact: Law Foundation of Newfoundland, Murray Premises, second floor, 5 Beck’s Cove, PO Box 5907, St. John’s NL, A1C 5X4, Tel: (709) 754-4424, Fax: (709) 754-4320.

Web: www.atyp.com/lawfoundation/

Lotus Light Charity School Scholarship

Deadline: March 31

Terms of reference: Any student who is 17 years or older and will be attending or continuing their studies at a recognized post-secondary institution on a full-time basis may be eligible to receive a $300 scholarship to assist him/her in his/her studies. Application must include: an official transcript, proof of acceptance for entry to recognized post-secondary educational institutions, resumes containing information of education, work and volunteer experience and current letters of reference from previous employers, teachers and volunteer organizations.

Contact: Lotus Light Charity Society, 220-357 East Hastings St., Vancouver BC, V6A 1P3, Tel: (604) 685-5548, Fax: (604) 605-1002.

Email: llcs@radiant.net

Lucent Global Science Scholars Program - Canadian Bureau for International Education

Deadline: April 2

Terms of reference: Three scholarships will be awarded to first year undergraduates in computing science/engineering, electrical engineering or related programs. Students participate in a Global Summit at Bell Labs in New Jersey and receive an internship offer from Lucent Canada.

Contact: Canadian Bureau for International Education, Lucent Global Science Scholars Program, 220 Laurier Ave. West, Suite 1550, Ottawa ON, K1P 5Z9, Tel: (613) 237-4830, ext. 242, Fax: (613) 237-1073.

Web: www.cbie.ca

Email: flepage@cbie.ca

Manchester Graduate School of Social Science - School of Law Scholarship

Deadline: May 2

Terms of reference: Manchester Graduate School of Social Sciences, the Faculty of Law has set aside funds to make available two scholarships for post-graduate research students. These scholarships are sufficient to cover home fees and some maintenance. These scholarships are available for post-graduate research in any area of legal study. Enquiries may be addressed to the director of post-graduate studies.

Contact: Director of Postgraduate Studies, School of Law, University of Manchester, Oxford Road, Manchester, M13 9PL, England, Tel: (0161) 275-3563, Fax: (0161) 275-3579.

Web: les.man.ac.uk/law

Email: p.g-law@man.ac.uk

The Maritime Dairy Industry Scholarship

Deadline: January 31

Terms of reference: The applicant must be a resident of either NS, NB, or PEI; currently attending a post-secondary education institution within Canada; completed at least the first year of post-secondary education and currently enrolled in a program that has application to the dairy industry; applicant must show professional and academic promise and a commitment and interest in the dairy industry; applicant must complete the application form, one-page letter stating their commitment and interest in the dairy industry, official transcript of marks for completed years in post-secondary education, and three reference letters must be available (at least one from a professor). Selection will be based on application requirements, academic standing, and potential contribution and commitment to the dairy industry.

Contact: Dairy Farmer of Canada - Maritime, 70 King Street, Suite A, Moncton NB E1C 4M6, Tel: (506) 855-8800, Fax: (506) 855-8500.

Web: www.justaddmilk.ca

Mattinson Endowment Fund Scholarship for Disabled Students

Deadline: June 1

Terms of reference: The purpose of the scholarship is to encourage disabled students to pursue university studies with the ultimate objective of obtaining a first university degree. Candidates must meet the following definition: “A disability is a functional limitation resulting from a physical, sensory, or mental impairment, which, for an indefinite period, affects the ability of the student to perform the activities necessary to participate fully in post-secondary learning”. Candidates must be Canadian citizens or permanent residents; must be entering or currently enrolled in a first undergraduate degree program in a Canadian post-secondary institution. Holders of an undergraduate degree are not eligible for the scholarship. The award is for one academic year, which may be renewed upon application. The holder of a Mattinson Scholarship is eligible to apply in subsequent years provided he/she submits a new application and all pertaining documents. Students who re-apply for further awards will be considered in competition with all other applicants. A student can receive the award for a total of four year maximum.

Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.

Web: www.aucc.ca

Email: awards@aucc.ca

The William McCallum Memorial Scholarship

Deadline: April 30

Terms of reference: This scholarship is awarded annually to a graduate of Dawson College entering, or already studying law. The scholarship is renewable in the amount of $500 per year, for a maximum of four years. It will be awarded to students who show high probability of both responsible citizenship and academic and professional success. The basis for selecting winners is scholarship, character, leadership, and community involvement.

Contact: The William McCallum Scholarship Committee, Dawson College, 3040 Sherbrooke St. West, Westmount QC, H3Z 1A4, Tel: (514) 931-8731, local 1348, Fax: (514) 931-5181.

Web: www.dawsoncollege.qc.ca

The McEuen Undergraduate Scholarship for Study in Scotland

Deadline: January 31

Terms of reference: The McEuen Scholarship is awarded annually in memory of Dr. Charles Stuart McEuen to a Canadian student resident in Canada. The Scholarship is tenable for a three-year course of studies toward an ordinary degree or a four-year course toward an honours degree. It is renewable from year to year for a maximum of four years. It covers all tuition fees, university residence costs and a stipend for basic expenses. Applicants must not be more than 21 years of age and must be attending university in Canada or be qualified for admission into a university in Canada.
The winner is chosen on the basis of outstanding academic achievement and leadership potential. Contact: McEuen Scholarship Foundation Inc., Suite 1100, 100 Queen St., Ottawa ON, K1P 1J9, Tel: (613) 237-5160, Fax: (613) 230-8842, Web: www.mceuenscholarship.com

John McLendon Memorial Post-graduate Scholarship Awards
Deadline: June 17
Terms of reference: The program offers post-graduate scholarships to minority senior level students who are planning to pursue a graduate degree in athletics administration. Contact: John McLendon Memorial Minority Post-graduate Scholarship, NACDA Foundation, PO Box 16428, Cleveland Ohio 44116 USA, Tel: (440) 892-4000, Fax: (440) 892-4007. Web: www.nacda.com

Mensa Canada Scholarship
Deadline: January 31
Terms of reference: Awards will be made on the basis of applicants' essays. The essay should describe the applicants' specific goals (academic, vocational or career) and any steps the applicants have taken, relevant experience gained and any difficulties the applicants have overcome in pursuit of the goals. The applicants must be Canadian citizens or landed immigrants enrolled in a full-time program at an accredited post-secondary institution. Maximum essay length is 250 words. Applications must be sent by e-mail. Follow contest rules carefully. Contact: Co-ordinator, Mensa Canada Scholarship Programme, 329 March Road, Suite 232, Box 11, Kanata ON, K2K 2E1, Tel: (613) 599-5897. Web: www.mensacanada.ca Email: Essays@MensaCanada.ca

National Congress of Italian-Canadians, Pacific Regions Scholarships
Deadline: April 20
Terms of reference: The NCIC Pacific Region offers up to four scholarships yearly of $500 each to students in the Italian-Canadian ethnic-cultural community who are beginning or continuing their studies at post-secondary institutions in British Columbia. The scholarships will be awarded on the basis of academic excellence, personal character, and social responsibility. The application must be accompanied by a transcript of grades, letter of recommendation, one-page letter by candidate regarding career goals. Contact: NCIC, c/o 3075 Slocan Street, Vancouver BC, V5M 3E4, Tel: (604) 430-3337, Web: www.fallculturalcentre.ca Email: info@italiculturalcentre.ca

National Federation of the Blind: Advocates for Equality
Deadline: October 15
Terms of reference: The NFB: AE will be annually awarding scholarships to recognize outstanding blind, partially sighted and deaf-blind Canadian scholars. All scholarships are awarded on the basis of academic excellence, service to the community and financial need. All applicants must be legally blind, reside in Canada and be pursuing or planning to pursue a full-time college or university level course of study, at a graduate or undergraduate level. Contact: The National Federation of the Blind: Advocates for Equality Scholarship Committee, #107-1455 Ellis Street, Kelowna BC, V1Y 2A3, Tel: (250) 862-3551, Fax: (250) 862-3966. Web: www.blindcanadians.ca Email: info@blindcanadians.ca

The Navy League of Canada and Royal Canadian Benevolent Fund Scholarship Awards
Deadline: April 15
Terms of reference: The Navy League of Canada in co-operation with the Royal Canadian Naval Benevolent Fund award scholarships annually to serving and former Royal Canadian Sea Cadets entering their first year to University Course leading to a degree, Community College or Technical Institute leading to a certificate, and must be an active serving cadet at the time of application. Contact: The National League of Canada, 305 Rideau Street, Ottawa ON K1N 9E5, Toll-Free: 1-800-385-6269, Fax: (613) 990-8701. Web: www.navyleague.ca Email: national@navyleague.ca

Nuu-Chah Nulth Post-Secondary Scholarship Awards
Deadline: August 31
Terms of reference: A scholarship in the amount of $500 is awarded to students of Nuu-chah-nulth ancestry who have completed a minimum of eight months of post-secondary work and will be enrolled in full-time (four courses and/or 12 credit hours) post-secondary studies. Send an application form, a transcript of last year's grades, a letter of acceptance for the next school year and a minimum of a one-page essay on the importance of post-secondary education for Nuu-chah-nulth. Contact: Nuu-chah-nulth Tribal Council, Box 1383, Port Alberni BC, V9Y 7M2, Tel: (604) 724-5757, Fax: (604) 723-0463, Web: www.nuuanchahnulth.org

Ontario Graduate Scholarship Program
Deadline: August
Terms of reference: The Ontario Graduate Scholarship (OGS) program is designed to encourage excellence in graduate studies at the master's and doctoral levels. Students are eligible to apply if they: (a) plan to enrol full-time in an approved graduate program leading to a master's or doctoral degree at an Ontario university that is financially assisted by the government of Ontario; (b) are a Canadian citizen or permanent resident, or have been admitted to Canada with a student visa; (c) have an average of at least A- or the equivalent, on the last 20 one term/semester courses, or the equivalent, completed. OGS awards are not automatically renewed. You must submit a new application each year (12-month period). Contact: Ontario Graduate Scholarship Program, Student Support Branch, Ministry of Training, Colleges and Universities, PO Box 400, 4th Floor, 189 Red River Rd, Thunder Bay ON, P7B 6G9, Tel: (807) 343-7257, 1-800-465-3957. Web: ospap.gov.on.ca

P.E.O. International Peace Scholarship Fund for Women
Deadline: April 14
Terms of reference: A scholarship is offered annually by the P.E.O. to a woman who is from a country other than the United States and Canada. The applicant must be qualified for admission to full-time graduate study or working toward a graduate degree in the University of their choice in the United States or Canada. The applicant must have a full year of class work remaining and enrolled and on campus for the entire school year of the grant and must promise to return to their country immediately following completion of degree to pursue their professional career. Contact: P.E.O. International Peace Scholarship Fund, P.E.O. Executive Office, 3700 Grand Avenue, Des Moines, Iowa 50312-3820, Tel: (515) 255-3153, Fax: (515) 255-3820, Attention: International Student Advisor. Web: www.peointernational.org

Petro-Canada Graduate Research Award Program
Deadline: March 28
Terms of reference: The program was established to recognize academic excellence and to support and encourage graduate research in specialized fields of study relating to the petroleum industry. Fields of study include sciences, engineering, social sciences, and business administration. Candidates must be Canadian citizens or permanent residents and working towards a master's or doctoral degree (on a full-time basis) on a subject related to the oil and gas industry. Awards are granted on the basis of academic standing and demonstrated potential for advanced study and research. Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca Email: awards@aucc.ca

The Pisapio Scholarships
Deadline: September 25
Terms of reference: Scholarships in the amount of $1,000 are available each year. Applicants must be accepted for admission to a university, be a full-time student working toward an undergraduate degree or graduate degree from the university and have completed a minimum first year of university studies. The awards will be given first to eligible applicants who are residents of the City of Nelson, second to eligible applicants who are residents of an area within a 50 mile radius of City of Nelson and third to eligible applicants who live in the East or West Kootenay regions. Contact: The Pisapio Scholarships Trust, 421 Baker St., Nelson BC V1L 4A7. Email: info@paulingagencies.com

Prosper Credit Union Education Award Program
Deadline: March 31
Terms of reference: Prospera Credit Union offers several scholarships, bursaries and life long learner awards to the members. Applicants must be members in good standing of Prospera Credit Union for at least one year prior to the application deadline. Applicants must be residents of British Columbia, but may attend a university or college anywhere in Canada. Contact: Please contact any Prospera Credit Union branch for information. Web: www.prosperacreditunion.ca Email: info@prosperacreditunion.ca

Public Works Association of British Columbia Scholarship
Deadline: June 30
Terms of reference: This scholarship in the amount of $1,000 awarded in two $500 instalments, is open to any applicant planning full-time study at an educational institution in BC. Study will be in a public Works field. Preference is given to female applicants and applicants returning to an educational institution from the workforce or applicants who have completed at least one year of study in their proposed field. Applications must be accompanied by a letter of reference from a BCWA member. Contact: Public Works Association of BC, Scholarship Committee, 16705 Fraser Highway, Surrey BC, V3S 2X7, Tel: (604) 576-7054, Fax: (604) 576-7122. Web: http://pwabc.cpxa.net

Gillis Purcell Memorial Journalism Scholarship for Native Canadians
Deadline: December 31
Terms of reference: The scholarship is in the amount of $4,000 annually for a native Canadian who is studying journalism at a Canadian institution. Contact: The Canadian Press, 36 King Street East, Toronto ON, M5C 2L9, Toll-Free: 1-800-268-8149. Web: www.cp.org

Ross C. Purse Doctoral Fellowship - CNIB
Deadline: April 1
Terms of reference: The purpose of the fellowship is to encourage and support theoretical and practical research and studies at the graduate or doctoral level in the fields of blindness and visual impairment.
Applications will be considered from persons studying at a Canadian university or college, or at a foreign university where a commitment to work in the field of blindness in Canada for at least two years can be demonstrated. Preference will be given to graduates of a Canadian university or college. Applicants will be expected to have achieved a high academic standing and to have exhibited superior intellectual ability and judgment.

Contact: The Secretariat, Ross C. Purse Doctoral Fellowship, Vice-President, Client Services and Technology, The Canadian National Institute for the Blind, 1929 Bayview Avenue, Toronto ON, M4G 3E8, Tel: (416) 486-2500, Fax: (416) 480-7677.

Web: www.ncib.ca

Email: awards@cnib.ca

Queen Elizabeth II Silver JubileeEndowment Fund For Study in a Second Official Language Award Program

Deadline: March 31

Terms of reference: The purpose of the award is to encourage young Canadians who wish to improve their proficiency in their second official language to pursue studies, on a full-time basis, at another university which functions in the other official language. A student will be in a milieu in which that language predominates. All disciplines - except translation - are eligible. The students must continue studies in the discipline in which they are enrolled at their home university. Candidates must be Canadian citizens or permanent residents of Canada and must be currently enrolled in the second or third year of their first undergraduate university program. In addition, they must have sufficient ability in their second official language to pursue their studies in that language.

Web: www.aucc.ca

Contact: Canadian Awards Program, International and Canadian Programs Division, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.

Email: awards@aucc.ca

Queen Elizabeth II British Columbia Centennial Scholarship

Deadline: January 31

Terms of reference: One major scholarship with a total value of $60,000 for two years is available each year. In addition to the major scholarship, two minor scholarships of $5,000 each are available for the two top runners-up to the major winner each year. The scholarship will be awarded each year on a competitive basis to graduate study:

- who has obtained an undergraduate degree from a British Columbia public post-secondary institution;
- whose domicile or ordinary residence is in the Province of BC;
- who is a Canadian citizen or Permanent Resident (Landed Immigrant);
- who, in the opinion of the Advisory Committee, is a person of unusual worth and promise, and qualifies under the regulations; and
- who proposes to conduct the studies for which the scholarship is awarded at an institution in any British Commonwealth country, except Canada.

The advisory committee will make its recommendations on the basis of academic achievement, demonstrated aptitudes, personal qualities and character, as well as interest and participation in institutional and community affairs.

Contact: Student Services Branch, Special Programs, Ministry of Advanced Education, PO Box 9173, Stn Prov Govt, Victoria BC, V8W 9H7, Tel: (250) 387-6116, Fax: (250) 356-5440.

Web: www.aved.gov.bc.ca/studentservices/student/sp/awardsdpq2.htm

Email: AVED.SpecialPrograms3@gov.bc.ca

Research Support Opportunity in Arctic Environmental Studies - Canadian Northern Studies Trust

Deadline: January 31

Terms of reference:

- The Meteorological Service of Canada (a division of Environment Canada) sponsors a unique research support opportunity by providing accommodation, facilities, and services at the high Arctic Weather Station (HAWS) at Eureka on Ellesmere Island, to graduate students enrolled in masters or doctoral studies at a Canadian university.

Preference will be given to environmental research proposals in physical or biological sciences for which the location at Eureka is demonstrably advantageous. These opportunities are not confined to students engaged in weather-related studies.

Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.

Web: www.acuns.ca

Retail BC Scholarship Program

Deadline: March 31

Terms of reference: The purpose of the program is to recognize and encourage individuals who have shown an interest in pursuing a career in the retail industry. Applicants must be a resident of BC, currently working or have worked in the retail industry and applying for, or currently enrolled in, a retail training program or business-related post secondary program.

Contact: Retail Scholarship Program c/o Retail BC, 1758 West 8th Avenue, Vancouver BC, V6J 1V6, Tel: (604) 736-0388, Fax: (604) 736-3156.

Web: www.retailbc.org

Email: inquiry@retailbc.org

Rhodes Scholarships

Deadline: September 15 (in Financial Assistance)

Terms of reference: Eleven scholarships are open for Canadian students and will be awarded annually. These scholarships are tenable at the University of Oxford, England. They are granted for two years, with the possibility of a third year. Scholarships are required to go to Oxford in October of each year. Selection is made on the basis of school and college records without written examinations. The qualities which will be considered in making the selection are: literary and scholastic attainment; fondness and success in outdoor sports; qualities of truthfulness, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness, and fellowship; exhibition of moral force of character and of instincts to lead and take an interest in one's contemporaries. Qualities of both character and intellect are the most important requirements for a Rhodes Scholarship; these are what the selection committees will seek. Financial need does not receive special consideration.

Candidate must be a Canadian citizen or a person domiciled in Canada; between 19 and 25; and have received an undergraduate degree before taking up the scholarship.

Contact: Further information and application forms may be obtained from Financial Assistance or from the office of the General Secretary for the Rhodes Scholarships in Canada, Suite 4700, Toronto-Dominion Centre, Toronto M5K 1E6 or from the Provincial Secretaries.

(Residents of Newfoundland) Contact S. Ann Colborne, FMD, The Rhodes Scholarship Trust, 154 leMarchand Road, St. John's NL, A1C 5B6, Tel: (709) 777-5215, (709) 777-5849.

(Royal Canadian Geographical Society, Canadian Northern Trust

Deadline: January 31

Terms of reference: The Royal Canadian Geographical Society (RCGS) is offering two $5000 scholarships. The James W. Bourque Scholarship is available for those enrolled in a doctoral program at a Canadian university and an RCGS studentship is open to students currently enrolled in a master's level program. The RCGS studentships will be awarded for research leading to a thesis on a subject relating to northern geography. Normally, but not exclusively, these studentships will be awarded to a student enrolled in a department of geography departments. The studentships are open to Canadian citizens or permanent residents of Canada.

Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.

Web: www.acuns.ca

Royal Canadian Golf Association Scholarships (RCGA)

Deadline: June 30

Terms of reference: The RCGA Foundation encourages the athletic and academic careers of promising Canadian golfers and students of the industry by offering financial assistance through scholarships and awards. Several scholarships are offered to promising junior golfers, landscape architects and turfgrass agronomists. The scholarships assist students with the cost of tuition, books, residence and other related expenses. Each application must meet standard criteria in order to be reviewed by the scholarship committee, which then chooses the recipients based on merit.

Contact: RCGA Foundation, Suite 1, 1333 Dorval Road, Oakville ON, L6M 4X7, Tel: (905) 849-9700, Toll Free: 1-800-263-0009, Fax: (905) 849-7040.

Web: www.rcga.ca

Email: rgca@rcga.ca

Simon Fraser University Iranian Club Scholarship

Deadline: October 1

Terms of reference: A scholarship is available to a full time graduate or undergraduate student at Simon Fraser University. The award is made on the basis of academic merit (minimum of 3.5 CGPA for eligibility).
Preference will be given to students who have contributed to promoting Persian/Iranian culture in general and specifically at SFU. Applicants should submit a letter outlining their eligibility, academic performance, community involvement and financial need, if applicable.

Contact: Submit application package to iranian@sfu.ca.
Email: iranian.sfu.ca

Elvie Smith Memorial Scholarship For Studies in Canadian Aerospace
Deadline: January 31
Terms of reference: The scholarship is awarded to the student who best exemplifies the spirit of Canada’s aviation pioneers in seeking to enter the field of aviation, and who wishes to pursue studies in preparation for such a career. This scholarship will be awarded to a Canadian student wishing to pursue studies in engineering or a scientific discipline related to aerospace at the graduate or post-graduate level in preparation for a career in aerospace. Submissions are to be made in writing. Applicants may choose to submit a letter, essay, or other written presentation. Factors to be considered are knowledge of Canadian aviation history, the entrant’s own activities associated with aviation, interest in aerospace technology, plans for a career in aerospace, and an explanation of how the scholarship would be used. Entries should not exceed 2000 words in length.

Contact: The Elvie Smith Memorial Scholarship Competition, c/o Canada’s Aviation Hall of Fame, PO Box 6360, Wetaskiwin, AB, T9A 2G1, Tel: (780) 361-1351, Fax: (780) 361-1239.
Web: www.caft.ca
Email: caft@telusplanet.net

John J Schumacher Minority Leadership Scholarship Program - Southwestern University School of Law
Deadline: unknown
Terms of reference: Southwestern University School of Law offers approximately 25 scholarships each year through the John J. Schumacher Minority Leadership Scholarship Program. These scholarships provide up to full tuition to members of the Southwestern entering class whose academic and leadership qualities are exceptional. The awards are renewable for each year of the program attended, provided that the recipient remains in good academic standing. Any prospective student who would like to apply for a Schumacher Scholarship should complete and return the Interest Form and transcripts from any secondary and post-secondary institutions attended.

Contact: Office of Admission, Southwestern University School of Law, 675 S. Westmoreland Avenue, Los Angeles, CA 90005, USA. Tel: (213) 738-6717.
Web: www.swlaw.edu
Email: admissions@swlaw.edu

E.M. (Betty) Spaltion Education Fund
Deadline: July 31
Terms of reference: The Betty Spaltion Fund is geared at encouraging women enter the road construction industry and related fields. A scholarship will be given annually to a student entering or continuing studies leading to a career in road building, road maintenance or heavy construction. Preference will be given to students who are female and/or members of minority groups. Program of study may be either full- or part-time at any BC college or university. Applications must include a brief 2000 word essay explaining why the student has obtained an education in the field, a resume and transcripts from any secondary and post-secondary institutions attended.

Contact: Chair, Betty Spaltion Educational Trust Fund, BC Road Builders and Heavy Construction Association, 307-8676 Greenall Avenue, Burnaby BC, VSJ 3M6, Tel: (604) 436-0220, Fax: (604) 436-2627.
Web: www.roadbuilders.bc.ca
Email: info@roadbuilders.bc.ca

CNST Scholarships in Northern Studies - Canadian Northern Studies Trust
Deadline: January 31
Terms of reference: The CNST offers one or two scholarships valued at $10,000 each, to students enrolled in a doctoral program at a Canadian University. Applications are invited from students who will (a) engage in research culminating in a thesis or other such document, (b) include direct northern field research or experience as part of their studies, and (c) whose programs are relevant to northern problems or issues. All subject areas including interdisciplinary studies will be considered as long as the research is conducted primarily in northern Canada.

Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.
Web: www.acuns.ca

SWANA Scholarship for Studies in Solid Waste Management & Environmental Protection
Deadline: January 31
Terms of reference: The BC Chapter of the Solid Waste Association of North America is offering a number of $500 scholarships to encourage students studying in disciplines related to solid waste management and the protection and leading careers in these fields. Recipients of the scholarships will be determined by a panel of SWANA members and will be chosen on the basis of intended course of studies, academic performance, involvement in school and community activities, involvement in activities which is related to solid waste management or environmental protection, a brief written submission (500 words or less) and references. Applicants must be registered in a full course of studies in an environmental management or related program at a recognized post-secondary institution in British Columbia. They must have completed their first year of post-secondary studies.

Contact: SWANA Scholarship c/o GVRD - Policy & Planning Department, 1500 Kingsway, Burnaby BC, V5H 4B8, Attention: Mike Stringer, Tel: (604) 436-6823, Fax: (604) 436-6811.
Web: www.ecowaste.com/swanabc

The Swedish Institute Guest Scholarship
Deadline: November 1
Terms of reference: This scholarship is offered to a qualified Canadian researcher or scholar of any age who wishes to spend an academic year on a research undertaking at a Swedish university or an independent research facility. The competition for the scholarship is global. The value of the scholarship is approximately SEK 6700 per month. Applicants should submit preliminary personal background information, particularly statements of purpose of study/ research and language competence, as well as a copy of letter of invitation from a Swedish University department.

Contact: Swedish Institute Scholarship Office, PO Box 7434, S-10391, Stockholm, Sweden.

Ted Trindell Memorial Scholarship
Deadline: January 8
Terms of reference: Five Awards of $1,000 are awarded to Metis or Non-Status persons from Northwest Territories pursuing full-time post-secondary studies. Academic merit and financial need will be considered.

Contact: Chairman, Selection Committee, Ted Trindell Scholarship Fund, Box 1375, Yellowknife NT, X1A 2P1, Tel: (403) 873-3505.

Trudeau Foundation Doctoral Scholarships
Deadline: January 11
Terms of reference: The Trudeau Foundation awards major scholarships to outstanding doctoral students in the social sciences and humanities. The Foundation supports three programmes: the Trudeau Fellows Programme, the Trudeau Scholars Programme, and the Trudeau Mentors Programme. Visit website for detailed information on application procedures.

Contact: The Pierre Elliott Trudeau Foundation, 1514 Doctor Penfield Avenue, 2nd Floor, Montreal, Quebec H3G 1B9, Tel: (514) 938-0001, Fax: (514) 938-0046.
Web: www.trudeaufoundation.ca
Email: tfinfo@trudeaufoundation.ca

United Food and Commercial Workers Union, Local 1518, Scholarship
Deadline: June 30
Terms of reference: Ten scholarships of $1,000 each are offered to students beginning or continuing studies in a full academic program of studies at the University of BC, University of Victoria, Simon Fraser University, BC Institute of Technology or at a college in British Columbia. Candidates must be a member, or the son, daughter, or legal ward of a member of the Union in good standing and must give full details of their own or their parents’ membership in the Union.

Contact: Award #00547: Apply at University of British Columbia, Student Financial Assistance and Awards, 822-6929.
Web: www.students.ubc.ca/finance

University College London Scholarships
Deadline: January 31
Terms of reference: The University College London Scholarships are offered to students from overseas. All scholarships are competitive and depend upon academic merit, and are tenable for the duration of the programme of study. To be eligible for any of the scholarships, applicants should: hold an offer of admission to a full-time program of study at University College London, be self-financing and liable to pay tuition fees at the rate for overseas students. These scholarships are not available to students already on a degree programme, or to students intending to pursue their studies at an institution other than UCL. These scholarships are available to students interested in graduate and undergraduate studies.

Contact: International Office, University College London, Gower Street, London, England WC1E 6BT, Tel: +44 171 380 7708, Fax: +44 171 380 7380.
Web: www.ucl.ac.uk/scholarships
Email: international@ucl.ac.uk

Vancouver Mycological Society
Deadline: unknown
Terms of reference: The Vancouver Mycological Society would like to make available the sum of $400

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to a graduate student studying in the province of BC whose field of study encompasses the macro fungi. Interested candidates must submit a one-page summary describing their research project; in addition, two candidates must indicate willingness to give a presentation on their research to the Vancouver Mycological Society at one of its regular meetings.

Contact: Vancouver Mycological Society, 101-1001 West Broadway, Box 181, Vancouver BC, V6H 4E4, Tel: (604) 988-9390 or (604) 322-0074.
Web: www.vannycoum.com
Email: info@vannycoum.com

Vancouver Police Department Scholarships
Deadline: July 31
Terms of reference: To encourage and assist sons and daughters of members of the Vancouver Police Department to attend the post-secondary educational institutions: University of British Columbia, Simon Fraser University, BCIT or any regional college in BC. In selecting the winners, academic standing, financial circumstances and services to the community may be considered. The letter of application should contain: the applicant’s full name, address, postal code, telephone number, place and date of birth, a list of secondary schools attended, along with dates of attendance, parent’s name and details of service with the VPD, transcript of marks from senior secondary school(s) and post-secondary educational institute(s) attended by applicant, other details which may assist the committee in its selection.

Contact: Secretary, Vancouver Police Department Scholarship Committee, 2120 Cambie Street, Vancouver BC, V5Z 4N6, Tel: (604) 717-3016, Fax: (604) 257-8751.

Vancouver Korean-Canadian Scholarships
Deadline: June 30
Terms of reference: The award will be made to Korean-Canadian students who excel in academic or vocational training, in community activities, or in other meritorious activities. Financial needs will also be considered.

Web: www.vkscf.org
Contact: Vancouver Korean-Canadian Scholarship Foundation, 201B - 1194 Lansdowne Drive, Coquitlam BC V3E 1J7.
Email: info@vkscf.org

Geraldo Donato Vertone Scholarship
Deadline: March 31
Terms of reference: A scholarship in the name of Geraldo Donato Vertone has been set up by the Italian Cultural Centre Society and is open to any student who is accepted to, or attends a post secondary institution leading to a university degree. To qualify, applicants must be of Italian origin, attend or be accepted at a University or Community College leading to a University degree and send an application letter detailing your reasons for applying, along with one letter of reference.

Contact: Italian Cultural Centre Society, Geraldo Donato Vertone Scholarship, 3075 Slocan Street, Vancouver BC, V5M 3E4, Tel: 430-3337, Fax: 430-3331.
Web: www.italianculturalcentre.ca

Village Credit Union Scholarship Program
Deadline: April 14
Terms of reference: One scholarship is available to those students who are presently enrolled full-time at a college or university and are planning to attend another year of studies, and who are members or the children and/or grandchildren of members of the Village Credit Union. Candidates will be selected on the basis of a completed Village Credit Union scholarship application form, a copy of the most recent official transcript (at least one from an instructor or faculty member) and a 200 word essay “Why I should be chosen as a winner of a scholarship from Village Credit Union”. Proof of enrolment will be required prior to payment of scholarship.

Contact: Village Credit Union, 1013 Brunette Avenue, Coquitlam BC, V3K 1E6, Tel: (604) 525-3331, Fax: (604) 529-0146.
Web: www.villagecu.com
Email: info@villagecu.com

Bridge Welsh Scholarship for Single Parent
Irish Women
Deadline: October 15
Terms of reference: The Bridge Welsh Scholarship was created from the royalties of Sheelagh Conway’s book The Faraway Hills are Green; Voices of Irish Women in Canada published in October 1992 by Women’s Press. In recognition of the 22 Irish women from across Canada whose stories are told in this book, Sheelagh Conway has donated half of the royalties to low-income, single-parent Irish women in Canada who wish to pursue their education at university or college level. The scholarship will be awarded on the basis of academic merit or promise as well as economic need. The value of the scholarship will vary from year to year depending on royalties.

Contact: Mary Broderick, Chairperson, Bridge Welsh Scholarship Program, 1570 Mountainview Road North, Georgetown ON, L7G 4T8, Tel: (416) 873-0873.

Welch Foundation Scholarship
Deadline: April 15
Terms of reference: A scholarship is offered to a promising scholar who wishes to study vacuum science, techniques or their application in any field. Candidates for the scholarship should have at least a bachelor's degree; a doctoral degree is preferred.

Contact: Dr. F.R. Shepherd, Nortel Networks, Dept. C115, 3500 Carling Avenue, Nepean ON, K2H 8E9, Tel: (613) 763-3285, Fax: (613) 763-2404.
Email: f.sims@nortelnetworks.com

Xerox Aboriginal Scholarships Program
Deadline: June 15
Terms of reference: Applicants must be an Aboriginal citizen and resident; status or non-status Indian, Metis or Inuit; full-time student at Canadian post-secondary institution with significant content in information technology. This includes but is not restricted to such disciplines as computer/math sciences, business administration or commerce and engineering. Applications must include a transcript, proof of admission to a recognized post-secondary institution, two letters of reference and a letter describing of the applicant’s program of study, interest in information technology, involvement in activities at school or in community and use of information technology at home, work or school.

Contact: Xerox Canada Ltd., Public Affairs Office, Affairs Coordinator, Corporate Affairs, Xerox Canada, 5650 Yonge Street, North York ON, M2M 4G7, Tel: (416) 733-6910, Fax: (416) 733-6811.
Web: www.xerox.ca
Email: chiara.lam@can.xerox.com

Yukon Foundation
Deadline: May 31
Terms of reference: Any Yukon resident can apply for funding from the Foundation.

Contact: Yukon Foundation, P.O. Box 31622, Whitehorse, Yukon Y1A 6L2, Tel: (867) 393-2454.
Web: www.yukonfoundation.com
Email: info@yukonfoundation.com

Zajac Scholarship - BC Centre For Ability
Deadline: September 20
Terms of reference: The Zajac Scholarship is awarded annually to an individual with a disability that is attending/or planning to attend post secondary education. Applicant must be a Canadian citizen or resident; have a physical, neurological and/or developmental disability; attend post secondary (credited courses leading to a degree, diploma or certificate) or a structured vocational program; demonstrate social interests, such as participation in volunteer work or leadership in community activities and demonstrate the philosophy and values of the BC Centre for Ability.

Contact: Zajac Scholarship Committee, c/o The BC Centre for Ability, 2805 Kingsway, Vancouver BC, V5R 5H9, Tel: (604) 451-5511, Fax: (604) 451-5651.
Web: www.centreforability.bc.ca
Email: home@centreforability.bc.ca

External Scholarships for Applied Sciences Students
Jim Allard Broadcast Journalism Scholarship - Canadian Association of Broadcasters
Deadline: June 30
Terms of reference: Aspiring broadcasters enrolled in a broadcast journalism course at a Canadian college or university are eligible to apply for the $2,500 scholarship. To qualify, simply explain on a separate piece of paper, in about 500 words, why you’re interested in broadcast journalism, what your career goal is, and how this scholarship can help you attain that goal. Complete the application and send it, with your 500-word outline and a signed recommendation from your course director, to the Canadian Association of Broadcasters (CAB). The judging committee also will look for evidence of strong character and leadership qualities; a willingness to assist others in the industry; genuine enthusiasm for a career in Canadian broadcasting, as reflected in activities related to broadcasting, such as school studies, part-time employment, etc.

Contact: Jim Allard Scholarship, The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5Z2.
Web: www.cab-acr.ca
Email: cab@cab-acr.ca

The BBM Scholarship (Bureau of Broadcast Measurement) - Canadian Association of Broadcasters
Deadline: June 30
Terms of reference: Applicants must be enrolled in a graduate studies program, or be in the final year of an Honours degree with the intention of entering a graduate program, anywhere in Canada. Applicants must submit a 250-word essay, outlining his/her interest in audience research. The applicant may also submit a copy of any course project or paper on research he/she has previously completed. The applicant should attach to his/her application three references/recommendations from appropriate sources. One should be from his/her course director or advisor.

Contact: BBM Canada Scholarship, c/o The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5Z2.
Web: www.cab-acr.ca

Canadian Engineering Memorial Foundation Claudette MacKay-Lassonde Scholarship
Deadline: January 20
Terms of reference: One scholarship is offered annually in Canada to a woman enrolled full-time in an accredited graduate engineering program at the PhD level of study. This Scholarship is meant to encourage women to act as mentors, to remain as university teachers in engineering and to recognize the contribution they bring to society through research, teaching and community involvement.

Contact: The Canadian Engineering Memorial Foundation, The Claudette MacKay-Lassonde Scholarship Award, P.O. Box 370, Renfew ON, K7V 4A6, Tel: 1-866-883-2363.
Web: www.cemf.ca
Email: info@cemf.ca
Canadian Engineering Memorial Foundation Undergraduate Engineering Scholarships
Deadline: January 20
Terms of reference: Five Undergraduate Engineering Scholarships are awarded annually to young women enrolled in an accredited engineering program in Canada. Scholarships are based primarily on demonstrated community leadership and involvement in extracurricular activities with a special emphasis on leadership. Winners are required to make a presentation to at least one pre-university audience after winning the award.
Contact: The Canadian Engineering Memorial Foundation, Undergraduate Engineering Scholarship Award, P.O. Box 370, Renfrew ON, K7V 4A6, Tel: 1-866-883-2363.
Web: www.cemf.ca
Email: info@cemf.ca

Dow/CCWEST - Women in Chemistry & Chemical Engineering Scholarship (Canadian Engineering Memorial Foundation)
Deadline: January 21
Terms of reference: Two scholarships are offered annually to women enrolled in second or third year of an undergraduate chemical engineering or chemistry program to encourage them to pursue this career path. The scholarship is based primarily on demonstrated leadership, community involvement and extracurricular activities. Academic achievement is also considered in awarding the scholarship. Dow Chemical Canada may consider the award winner for a summer, co-op or full time position at a Dow Chemical Canada location, depending on hiring needs identified at the time of the award. Selection of the award recipient will be made by Canadian Coalition of Women in Engineering, Science and Technology (CCWEST) based on all the information and references provided with the application. Applicants must be Canadian citizens or landed immigrants with permanent residence in Canada.
Contact: The Canadian Engineering Memorial Foundation, Dow Canada Canada/CCWEST Scholarship Award, P.O. Box 370, Renfrew ON, K7V 4A6, Tel: 1-866-883-2363.
Web: www.cemf.ca
Email: info@cemf.ca

Canadian Society for Chemical Engineers - Edmonton Chemical Engineering Scholarship
Deadline: April 30
Terms of reference: The Canadian Society for Chemical Engineering offers the Edmonton Chemical Engineering Scholarship to undergraduate students in chemical engineering entering the second, third, fourth, or fifth (in a five year program) year of studies at a Canadian university, for leadership qualities and demonstrated contributions to the Canadian Society for Chemical Engineering via participation in student chapters, and for above-average academic performance. Applicants must be members of the Canadian Society for Chemical Engineering. The application should document contributions to the Society, include a transcript of academic performance and be supported by two letters of reference.
Contact: Canadian Society for Chemical Engineers, #550-130 Slater Street, Ottawa ON, K1P 6Z2, Tel: (613) 232-6252, Fax: (613) 232-5862.
Web: www.cheminst.ca

Canadian Society for Chemical Engineers - Sarnia Chemical Engineering Community Scholarship
Deadline: April 30
Terms of reference: The Canadian Society for Chemical Engineering offers the Sarnia Chemical Engineering Community Scholarship to undergraduate students in chemical engineering who are entering the second year of a chemical engineering program at a recognized Canadian education institution. Visit website for details and information.
Contact: Visit www.electrofed.com.
Web: www.electrofed.com
Email: scholarship@electrofed.com

The Engineering Institute of Canada, Vancouver Island Branch Scholarships
Deadline: July 31
Terms of reference: Awards are offered to qualified students entering the second year of an accredited engineering program and to students transferring from a bridging program at a technical institute into either second year or third year in an accredited engineering program. Applicants must have graduated from a high school on Vancouver Island and must have achieved a minimum B grade average in the previous year of their engineering program. Applicants must be Canadian citizens or landed immigrants. The awards are granted on the basis of academic standing, financial need and other consideration such as disability or special circumstances. Candidates must submit an application form, a transcript and a letter of assessment from the department head or dean.
Contact: Engineering Institute of Canada, Vancouver Island Branch, 1565 Brodie Crescent, Victoria, BC V8N 1N3.
Email: mgalbraith@pircm.com

Ruth Hancock Scholarships - Canadian Association of Broadcasters
Deadline: June 30
Terms of reference: To qualify, you must complete the application, include a 500-word outline explaining why you’re taking a communications course, your career goal, and how the scholarships will help you and a signed recommendation from your course director. Applicants are expected to demonstrate strong character and leadership qualities; a willingness to assist others in the industry; genuine interest in pursuing a broadcasting career, as reflected in extra-curricular activities related to broadcasting and/or self-initiated undertakings.
Contact: Ruth Hancock Memorial Scholarships, The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5S2.
Web: www.cab-acr.ca

C.D. Howe Memorial Foundation Engineering Awards Program
Deadline: June 30
Terms of reference: The C.D. Howe Memorial Foundation is pleased to grant scholarships to students enrolled in an engineering program in a Canadian university. Two scholarships will be awarded each year. One award will be offered to a male and one to a female student. The awards are renewable twice for a total maximum tenure of three consecutive years. This is a merit scholarship open to qualified full-time engineering students entering the second year of their program and who will graduate within the next two or three years. Candidates must be Canadian citizens or permanent residents who have completed a full first year program in a Canadian faculty of engineering and who intend to continue their studies in engineering. Candidates must have maintained a first class standing as defined by the nominating institution. Applications are by nomination only.
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 600-350 Albert St., Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca
The Frederick T. Metcalfe Award Program (Canadian Cable Television Association)  
Deadline: March 28  
Terms of reference: This scholarship is open to qualified full-time students pursuing graduate level studies in disciplines related to new media companies, and delivering cable communications services in Canada: business (finance and marketing), economics, television production, mass communications engineering. Candidates must be Canadian citizens or permanent residents.  
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1. Tel: (613) 563-1236, Fax: (613) 563-9745.  
Web: www.aucc.ca  
Email: awards@aucc.ca

David Squires Foundation Scholarship  
Deadline: unknown  
Terms of reference: The Squires Foundation provides two scholarships to students in an information technology program who demonstrate significant financial need and maintain a high level of scholastic achievement. The winners will have to provide a transcript of marks for the most recent completed academic semester, proof of registration in applicable courses for this year and two personal references. Apply on website (www.itisb.com).  
Contact: Squire Foundation, Tel: (250) 595-8282 Fax: (250) 595-8088.  
Web: www.itisb.com  
Email: johns@itisb.com

External Scholarships for Arts and Social Sciences Students  
Jim Allard Broadcast Journalism Scholarship - Canadian Association of Broadcasters  
Deadline: June 30  
Terms of reference: Aspiring broadcasters enrolled in a broadcast journalism course at a Canadian college or university are eligible to apply for the $2,500 scholarship. To qualify, simply explain on a separate piece of paper, in about 500 words, why you're interested in broadcast journalism, what your career goal is, and how this scholarship can help you attain that goal. Complete the application and send it, with your 500-word outline and a signed recommendation from your course instructor, to the Canadian Association of Broadcasters (CAB). The judging committee also will look for evidence of strong character and leadership qualities; a willingness to assist others in the industry; genuine enthusiasm for a career in Canadian broadcasting, as reflected in activities related to broadcasting, such as home studies, part-time employment, etc.  
Contact: Jim Allard Scholarship, The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5S2.  
Web: www.cab-acr.ca  
Email: cab@cab-acr.ca

Association of Moving Image Archivists Scholarships  
Deadline: May 15  
Terms of reference: Five scholarships, Mary Pickford Scholarship, Sony Pictures Scholarship, CFI Sid Solow Scholarship, Rich Chace Foundation Scholarship and the Universal Studios Preservation Scholarship, will be given as financial assistance to students of merit who intend to pursue careers in the profession of moving image archiving. The applicant must be enrolled full time in a graduate level or other advanced program in film or television studies or production, library or information services, archival administration, museum studies or a related discipline; or must be accepted into such a program for the next academic year. Applicants need only submit one application form and one set of supporting documents to be eligible for all awards.  
Contact: AMIA, 1313 North Vine Street, Hollywood, CA 90028, Tel: (323) 463-1500 Fax: (323) 463-1506.  
Web: www.amianet.org  
Email: amia@amianet.org

BC Arts Council Scholarship Awards  
Deadline: May 15, September 15  
Terms of reference: Candidates must be a Canadian citizen or landed immigrant and a BC resident, and have attained first class standing in theatre, dance, music, film and video, creative writing, arts administration, museological and conservation studies, or visual arts programs.  
Contact: Coordinator, Scholarship Awards Program, BC Arts Council, 800 Johnson Street, Sth floor, PO Box 9819, Stn Prov Govt, Victoria BC, V8W 9W3, Tel: (250) 356-1724, Fax: (250) 387-4099.  
Web: www.bcartsCouncil.ca

Burnaby Historical Society Scholarship  
Deadline: June 15  
Terms of reference: This scholarship is given by Drs. Violet and Blythe Eagles, in honor of Evelyn Salisbury. The applicant for the scholarship should be an undergraduate attending an accredited British Columbia university or college and recommended in a major or honors program that specializes in Canadian history, with preference given to the history of British Columbia. Candidates must apply in writing, outlining their studies to date, provide an essay or an example of research done and including a current academic transcript and letters of recommendation from two professors at the university or college the candidate is attending.  
Contact: Burnaby Historical Society, Scholarship Committee, c/o Burnaby Village Museum, 6501 Deer Lake Avenue, Burnaby BC, V5G 3T6, Tel: (604) 293-6500, Fax: (604) 293-6525.  
Government Finance Officers Association - Minorities in Government Finance Scholarship  
Deadline: February 3  
Terms of reference: The GFOA's Minorities in Government Finance Scholarship of $5,000 will be awarded to an upper-division undergraduate or graduate student of public administration, (governmental) accounting, finance, political science, economics, government or non-profit management. The candidate must belong to one of the following groups: Black, Indian, Eskimo or Aleut, Asian or Pacific Islander, Hispanic. Must be a citizen or permanent resident of the United States or Canada. Recommendation by the student's academic advisor, department chair or dean is required.  
Contact: Scholarship Committee, Government Finance Officers Association, 203 North LaSalle Street, Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700.  
Web: www.gfoa.org

Leo J. Krysa Family Undergraduate Scholarship in Education, History, Humanities, Social Sciences  
Deadline: March 1  
Terms of reference: The Leo J. Krysa family undergraduate scholarship is awarded annually to a student in the faculty of Arts or Education entering the final year of study in pursuit of an undergraduate degree. Applicants' programs must emphasize Ukrainian and/or Ukrainian-Canadian studies, through a combination of Ukrainian and East European or Canadian courses in one of the following areas: education, history, humanities and social sciences. The scholarship is for an eight-month period of study at any Canadian university. Candidates must be Canadian citizens or permanent residents of Canada at the time of application.  
Contact: Canadian Institute of Ukrainian Studies, 450 Athabasca Hall, University of Alberta, Edmonton AB, T6G 2E8. Tel: (780) 492-2972, Fax: (780) 492-4967.  
Web: www.cius.ca  
Email: clus@ualberta.ca

W. Kaye Lamb Essay Scholarship  
Deadline: May 15  
Terms of reference: Two scholarships are offered to students registered at BC colleges or universities. To apply for the scholarship, Candidates must submit a letter of application, an essay of 1500 - 3000 words on a topic to the history of British Columbia and a letter of recommendation from the instructor for whose course the essay was written.  
Contact: Chair BC Historical Federation Scholarship Committee, 107 Regina Avenue, Victoria, B.C. V8Z 1J4  
Web: www.bchistory.ca

Robert Markle Scholarship  
Deadline: November 30  
Terms of reference: Award of $1,200 amount given to a First Nations student of a visual arts program at a post-secondary institution. Application must include a resume stating personal background and heritage; selection of colour slides and/or black and white photographs or a small portfolio of recent work; letter of recommendation from instructor. All entries will be returned to the sender.  
Contact: Robert Markle Fund, c/o Woodland Cultural Centre, 184 Mohawk St., PO Box 1506, Brantford ON, N3T 5V6. Tel: (519) 759-2650, Fax: (519) 759-8912.  
Web: www.woodland-centre.on.ca  
Email: woodlandcentre@execulink.com

New Brunswick Arts Scholarships  
Deadline: January 31  
Terms of reference: The Arts Scholarships program provides awards to New Brunswick students and arts professionals who are pursuing full-time or short-term studies for the purpose of becoming an arts professional or pursuing a career as an arts professional. The program is designed to recognize and encourage those who have already completed some basic training and who have demonstrated exceptional potential and talent as artists. The applicant should intend to study creative writing, music, theatre, dance, film/video, visual arts/photography, or craft at a recognized institution or with a recognized private instructor for the purpose of pursuing a career as a professional artist or an arts professional.  
Contact: Arts Development Branch, Department of Economic Development, Tourism and Culture, PO Box 6000, Fredericton NB, E3B 5H1, Tel: (506) 453-2555.

Community Arts Council of Richmond Scholarships  
Deadline: March 31  
Terms of reference: The purpose of the scholarship is to assist in the educational costs of Richmond residents to attend recognized post secondary or advanced programs of study in the arts. Scholarships will be awarded for specific programs or courses of study within the discipline of visual arts, drama/theatre, creative writing, dance and music. Applicant must be a resident of Richmond for a minimum of one year and must not be less than seventeen years of age. Each application must be accompanied by two letters of recommendation, a personal resume outlining personal and immediate objectives and ultimate goals in field of study and copy of application form and or letter of acceptance from program, indicating tuition fees and other related costs. Applicant must be prepared to audition for jury evaluation by scholarship committee. Visual arts applicant to submit portfolio. Creative writing applicant to submit typed copy.
External Scholarships for Business Administration Students

Ellen Bell YMCA Memorial Scholarship

Deadline: February 14

Terms of reference: Awarded to a student pursuing a career in marketing and advertising. Ellen Bell will be remembered for the boundless energy, intelligence, kindness and willingness to commit herself to the betterment of the community. The scholarship will be granted to an individual or individuals who demonstrates these qualities. Applications must be in writing, giving full particulars together with the reason for applying (in 500 words or less) along with letters of reference.

Contact: Ellen Bell YMCA Memorial Scholarship Committee, YMCA Association Services, #500-1188 West Georgia Street, Vancouver BC, V6E 2Z3, Tel: (604) 681-9622, Fax: (604) 688-0220.
Web: www.vanymca.org

CGA Academic Excellence Scholarship

Deadline: April 30

Terms of reference: The Certified General Accountants Association of British Columbia awards a $500 scholarship to an accounting student who has completed the third year of the undergraduate degree program at Simon Fraser University. The $500 scholarship will be applied to the student’s tuition fees when the recipient enrols in the final year of Simon Fraser University’s degree program. To apply for this scholarship, please make formal application to the Financial Assistance Office where the application will be reviewed and a recommendation made to the Certified General Accountants Association.

Contact: Certified General Accountants Association of British Columbia, 300 - 1867 West Broadway, Vancouver BC, V6J SL4, Tel: (604) 732-1211, Fax: (604) 732-9439.
Web: www.cga-bc.org
Email: info@cga-bc.org

CGA Continuing Education Tuition Scholarship

Deadline: April 30

Terms of reference: The Certified General Accountants Association of British Columbia annually awards $2000 CGA Continuing Education Tuition Scholarships to graduates of the accounting programs at Simon Fraser University. Three Continuing Education Scholarships are available for SFU students: 2 to graduates of the BBA program and 1 to a graduate of the MBA program. The $2000 scholarship will be credited toward tuition fees when the recipient enrols in the professional education program of the Certified General Accountants Association of British Columbia. This scholarship is valid for the academic year following the award; the academic year is from September to June. To apply for these scholarships, please make formal application to the Financial Assistance Office where the applications will be reviewed and a recommendation made to the Certified General Accountants Association.

Contact: Certified General Accountants Association of British Columbia, 300 - 1867 West Broadway, Vancouver BC, V6J SL4, Tel: (604) 732-1211, Fax: (604) 732-9439.
Web: www.cga-bc.org
Email: info@cga-bc.org

Certified Management Accountants Society of British Columbia Scholarships

Deadline: April 30

Terms of reference: The WC Easton Scholarship will be awarded to the student with the highest final mark in Seminar in Administrative Policy BUS 478 in each year May 1 to April 30 that applies for the award. The BC Management Accounting Scholarship will be awarded to the student with the highest final mark in Managerial Accounting II BUS 424 in each year May 1 to April 30 that applies for the award. The $1500 scholarships will be credited toward tuition fees when the recipient enrols in the Certified Management Accountant program in BC. To apply for these scholarships, please make formal application to the Financial Assistance Office where the applications will be reviewed and a recommendation made to the Certified Management Accountants Society of BC.

Contact: Suite 1055, Teo Bentall Centre, 555 Burrard St., Box 269, Vancouver, BC V7X 1M8, Tel: (604) 687-5897, Fax: (604) 687-6688, Toll-Free: 1-800-663-9646.
Web: www.cmbc.com

Community Futures Development Corporation of Alberni-Clayoquot Business Studies Scholarship

Deadline: June 15

Terms of reference: The Community Futures Development Corporation of Alberni-Clayoquot (CFDC of AC) is pleased to offer a $1000 Business Studies Scholarship to eligible applicants who have been Alberni-Clayoquot residents, entering a second year or subsequent year of business studies. Application must include a copy of previous year’s transcript, a resume and a 200-word essay stating long-term career objectives.

Contact: Community Futures Development Corporation of Alberni-Clayoquot, Attention: Lori Camire, 4757 Tebo Avenue, Port Alberni, BC, V9Y 8A9, Tel: (250) 724-1241, Fax: (250) 724-1028, Toll Free: 1-877-724-1241.
Web: www.cfdocac.ca
Email: info@cfdocac.ca

Government Finance Officers Association - Minorities in Government Finance Scholarship

Deadline: February 3

Terms of reference: The GFOA’s Minorities in Government Finance Scholarship of $5,000 will be awarded to an upper-division undergraduate or graduate student of public administration, (governmental) accounting, finance, political science, economics, or business administration (with a specific focus on government or non-profit management). The candidate must belong to one of the following groups: Black, Indian, Eskimo or Aleut, Asian or Pacific Islander, Hispanic. Must be a citizen or permanent resident of the United States. Applications must have been Alberni-Clayoquot residents, entering a second year or subsequent year of business studies.

Contact: Government Finance Officers Association - Minorities in Government Finance Scholarship, 203 North LaSalle St., Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700, Fax: (312) 977-9701.
Web: www.gfoa.org

Government Finance Officers Association - Frank L. Greathouse Government Accounting Scholarship

Deadline: February 3

Terms of reference: This scholarship competition is for senior students who are enrolled full-time in a university or college undergraduate accounting program in the United States or Canada. A senior is defined as a student in the last full year of study prior to being eligible for a baccalaureate degree. One or more scholarships of $3,500 each will be awarded. Candidates should have a superior academic record and have plans to pursue a career in state or local government or graduate studies in governmental accounting or public administration.

Contact: Scholarship Committee, Government Finance Officers Association, 203 North LaSalle Street, Suite 2700, Chicago IL, 60601-1210, Tel: (312) 977-9700.
Web: www.gfoa.org

Donald H. Lander Scholarship

Deadline: May 1

Terms of reference: One scholarship, valued at $1000, is offered to a student entering the third year of a program leading to a degree in business administration or management studies. Candidates must be Canadian citizens or landed immigrants and will have achieved a high level of academic excellence (“A” average), be entering the third year of the program and have demonstrated an interest and involvement in international management studies. This may include participation in an organization such as AIIESEC. Letters of recommendation and transcripts must be sent directly from the university.
Contact: Donald H Lander Scholarship, Community Foundation of Ottawa, 75 Albert Street, Suite 301, Ottawa ON, K1P 5E7, Tel: (613) 236-1616 ext. 224, Fax: (613) 236-1621.
Web: www.communityfoundationottawa.ca

John McWilliams Memorial Scholarship Fund - The Next Wave Commercial Traveller’s Association of Canada

Deadline: July 1

Terms of reference: The purpose of the scholarship is to assist the advancement of a worthy student in the field of sales and marketing. Candidate must be enrolled full-time in a post secondary educational institution in a field related to the area of sales and marketing and must be a permanent resident of Canada for at least two years. Submission must include a resume, a written submission outlining personal and professional goals in the sales and marketing field and details of the strategy in place for achievement of these goals and three reference letters.
Contact: The John McWilliams Memorial Scholarship Fund, c/o NWCTA, Box 336, Winnipeg MB, R3C 2H6, Tel: (204) 284-8900 or 1-900-665-6928, Fax: (204) 284-8909 or 1-877-284-8909.
Web: www.nwcta.com
Email: nwcta@nwcta.com

The Frederick T. Metcalf Award Program (Canadan Cable Television Association)

Deadline: March 28

Terms of reference: This scholarship is open to qualified full-time students pursuing graduate level studies in disciplines related to new media companies and delivering cable communications services in Canada: business (finance and marketing), economics, television production, mass communications, engineering. Candidates must be Canadian citizens or permanent residents.
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@auc.ca

Robert E. Oliver Scholarship (Advertising Standards Canada)

Deadline: February 1

Terms of reference: ASC is pleased to award one $1,000 scholarship annually to a full-time post secondary student enrolled in a recognized advertising and/or marketing program at a Canadian university or community college. The Robert E. Oliver Scholarship commemorates ASC’s first president - a pioneer of Canadian advertising self-regulation. Robert E. Oliver played a key role in developing the Canadian Code of Advertising Standards, the principal instrument of advertising self-regulation. Only one nominee per institution.
Contact: Standards Division, Advertising Standards Canada, 350 Bloor Street East, Suite 402, Toronto ON, M4W 1HS, Tel: (416) 961-6311, Fax: (416) 961-7904.
External Scholarships for Education Students

Central Okanagan Teachers Association - A.S. Matheson Education Scholarship
Deadline: September 30
Terms of reference: A scholarship of $1,000 will be awarded annually to a son or daughter of a current or retired COTA member who is presently enrolled at a post-secondary institute and is proceeding into the first year of a teacher education program. The application must be accompanied with a letter of acceptance to the Faculty of Education and teacher education program. The COTA Scholarship Committee will consider student ability and potential and accompanying letter or recommendation from a faculty member of an enrolled course in first year. Contact: Central Okanagan Teachers' Association, 210-1751 Harvey Avenue, Kelowna, BC, V1Y 6G4, Tel: (250) 860-3866, Fax: (250) 862-3024. Web: www.thecota.ca
Email: info@thecota.ca

Leo J. Krysa Family Undergraduate Scholarship in Education, History, Humanities, Social Sciences
Deadline: March 1
Terms of reference: The Leo J. Krysa family undergraduate scholarship is awarded annually to a student in the faculty of Arts or Education entering the final year of study in pursuit of an undergraduate degree. Applicants must be full-time students enrolled in an undergraduate program at any Canadian university. Candidates must be Canadian citizens or permanent residents of Canada at the time of application. Contact: Canadian Institute of Ukrainian Studies, 450 Athabasca Hall, University of Alberta, Edmonton AB, T6G 2E6. Tel: (780) 492-2972, Fax: (780) 492-4967. Web: www.cius.ca
Email: cius@ualberta.ca

External Scholarships for Science Students

Association of Professional Biologists Scholarship
Deadline: July 31
Terms of reference: The scholarship, valued at $1,000, may be awarded each year to a student, who is son or daughter of a member in good standing of the association, and who is entering the third or fourth year of a program leading to a degree in biology or a closely related area as specified in the membership guidelines. It is the intention of the association that the student will be planning on a career in some aspect of biology. The applicant shall complete an application form, as well as enclosing a copy of her/his transcript, two letters of reference. Contact: Association of Professional Biologists, Suite 205 723 Johnson Street, Victoria BC, V8W 3C7, Tel: (250) 383-3306, Fax: (250) 383-2400. Web: www.apbbc.bc.ca
Email: apbbc@pabc.bc.ca

Dow/CCWEST - Women in Chemistry & Chemical Engineering Scholarship (Canadian Engineering Memorial Foundation)
Deadline: January 21
Terms of reference: Two scholarships are offered annually to women enrolled in second or third year of an undergraduate chemical engineering or chemistry program to encourage them to pursue this career path. The scholarship is based primarily on demonstrated leadership, community involvement and extracurricular activities. Academic achievement is also considered in awarding the scholarship. Dow Chemical Canada may consider the award winner for a summer, co-op or full time position at a Dow Chemical Canada location, depending on hiring needs identified at the time of the award. Selection of the award recipient will be made by Canadian Coalition of Women in Engineering, Science and Technology (CCWEST) based on all the information and references provided with the application. Applicants must be Canadian citizens or landed immigrants with permanent residence in Canada. Contact: The Canadian Engineering Memorial Foundation, Dow Canada Canada/CCWEST Scholarship Award, P.O. Box 370, Rentfrew ON, X7V 4A6, Tel: 1-866-883-2363. Web: www.cemf.ca
Email: info@cemf.ca

Canadian Society for Chemistry's Alfred Bader Scholarships
Deadline: May 30
Terms of reference: The Canadian Society for Chemistry offers the Alfred Bader Scholarship of $1,000 as a mark of excellence for achievement in organic chemistry or biochemistry by undergraduate students completing their final year of study in an Honours program. Nominees must be student chapter members of the CSC and be continuing in a graduate program in chemistry or biochemistry at a Canadian university. Application shall include a copy of the honors' research project report; a statement from the research supervisor describing the student's contribution at the academic and extracurricular levels, two letters of reference; and an official transcript of the student's academic record, all in quadruplicate. Contact: Canadian Society for Chemistry, #550-130 Slater Street, Ottawa ON, K1P 6E2. Tel: (613) 232-6252, Fax: (613) 232-5862. Web: www.cheminst.ca
Email: cic_adm@foxdnstn.ca

Canadian Space Agency Spaceflight and Life Sciences Training Program Scholarship
Deadline: January 31
Terms of reference: The Canadian Space Agency will sponsor one to two Canadian student(s) to participate in the NASA Space Flight and Life Sciences Training Program (SLSTP), a six-week, summer research program at the Kennedy Space Center (KSC) in Florida. The program will allow students to participate in the preparation, pre- and postfligh test, data analysis and report writing phases of simulated space flight experiments and life sciences research. The CSA's Space Life Sciences Program will sponsor student(s) who have demonstrated scholastic excellence and an interest in space life sciences to participate in this unique learning experience. Eligibility requirements and application materials are available on website. Contact: SLSTP Canadian Space Agency, Space Science Program, 6767 route de l'aeroport, Saint-Hubert Quebec, J3Y 8Y9. Web: www.space.gc.ca/slstp
Email: slstsp@space.gc.ca

Robert Canton Scholarship
Deadline: September 30
Terms of reference: The scholarship is intended to support students with high ideals and demonstrated interest in environmental studies, as well as specific goals leading to future work in that field. Applicants, graduate or undergraduate, must be in attendance in a post-secondary program in the province of British Columbia with course work or future plans that include scientific and environmental issues. Contact: Mail the completed application to: Robert Canton Scholarship, 1946 West 13th Avenue, Vancouver, BC V6J 2H6.

Web: http://wlapwww.gov.bc.ca/airairquality/carf/caton_summary.html

The Cement Association of Canada Environmental Scholarships Program
Deadline: July 2
Terms of reference: The purpose of the scholarship is to encourage academic excellence in the pursuit of higher education and to increase the awareness of the cement industry at Canadian universities chosen by the Cement Association of Canada. Award recipients will be selected from environmental science or environmental engineering programs. Applicants must be Canadian citizens or have lived in Canada for at least two years as a permanent resident and entering the third year of a full-time undergraduate program at a qualifying institution in the year of application. Applicants must have fully completed the two years of course work in an environmental science or environmental engineering program that is required to continue a third year of their eligible program. Evaluation is based upon the student's academic transcripts, a 500-word essay, letters of reference and the results of any achievement or aptitude tests that have been taken by the student. In addition to academic merit, the selection committee will take into consideration the student's involvement in any extracurricular activities. Each eligible educational institution may nominate one candidate. The award is tenable for up to two consecutive academic years or until the award holder obtains a first undergraduate degree. Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca
Email: awards@aucc.ca

Guide Outfitters Association of BC Scholarship Program
Deadline: March 31
Terms of reference: The Guide Outfitters Association of BC is awarding a number of scholarships to students graduating from grade 12 or who have completed their first year post secondary. Eligible students will be planning to pursue a career in some aspect of wildlife management. Examples include, wildlife biologist, research biologist, habitat biologist, conservation officer, wildlife veterinarian, teaching and management, etc. Applications must include an essay of at least 1000 words describing the applicant's view on the role of hunting in wildlife management. Contact: Guide Outfitters Association of BC, Box 94675, Richmond BC, V6Y 4A4. Tel: (604) 278-2688, Fax: (604) 278-3440. Web: www.goabc.org
Email: eastham@goabc.org

The Frederick T. Metcalf Award Program (Canadian Cable Television Association)
Deadline: March 29
Terms of reference: This scholarship is open to qualified full-time students pursuing graduate level studies in disciplines related to new media companies and delivering cable communications services in Canada: business (finance and marketing), economics, television production, mass communications engineering. Candidates must be Canadian citizens or permanent residents. Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca
Email: awards@aucc.ca

Port Moody Ecological Society Scholarship
Deadline: May 31

Web: www.adstandards.com
Terms of reference: An award is offered to a School District #43 student currently engaged in an environmental studies discipline at a post secondary institution. Candidate must be a School District #43 student who is enrolled at a post secondary institution and has completed at least one year towards accreditation in an environmental studies program. Candidates must have a strong ongoing volunteer record with environmental service groups, a good academic record, career goals which reflect a commitment to the environment and financial need. Application package must include a complete the application form, a personal statement (type, not to exceed 500 words) outlining volunteer experience and its benefits, career plans, financial need, copies of high school and post secondary institution transcripts, a resume (not to exceed two pages) and two letters of reference regarding qualifications.

Contact: Port Moody Ecological Society, 340 loco Road, Port Moody BC, V3H 2T7 Tel/Fax: (604) 469-9106.

Ukthed Foundation Scholarship for Biological Pest Management
Deadline: March 15
Terms of reference: To a student pursuing studies towards a degree in pest management at the Department of Bioscience, Simon Fraser University. Demonstrated academic excellence and full-time registration are a requirement. Applications should include a completed application form, one page typed essay about what profession you want to follow and why, and two letters of reference from teachers, copies of high school transcripts and university transcripts. Application forms are available from, http://www.ukthedefoundation.org

Please mail completed application with required documentation to: The Ukthede Foundation, 7484 Arbutus Drive, Agassiz, BC, Canada V0M 1A2 or email to: raj55@telus.net

Externally Administered Bursaries

The following bursaries are not administered by Simon Fraser University. The information is intended for general reference only; it may be subject to change. The student is responsible for enquiring and applying through the appropriate agency as indicated in the description.

External Bursaries for All Students
BC Government and Service Employees’ Union Scholarships
Deadline: February 28
Terms of reference: Scholarships are available each year to students who are BCGEU members or relatives of members of staff. Applicants must be registered full time in a post secondary program at a BC education institution with a satisfactory academic record.

Contact: Education Officer, Attention: Scholarship Committee, BC Government and Service Employees’ Union, 2994 Douglas Street, Victoria BC, V8T 4N4

Web: www.bcgue.bc.ca

British Columbia Health Care Bursaries
Deadline: November 15, March 15 and July 15
Terms of reference: You may apply for a health care bursary if you meet all of the following:
- you have been permanent resident of BC for the last 12 months; and
- you are not in default of a BC Student Loan; and
- during the bursary period for which you are applying, you are enrolled in an eligible health care program of study, at least four months long, at a B.C. Cancer Agency, that leads to a certificate, diploma or degree recognized for practice in B.C.; and
- you can demonstrate financial need.

Contact: Health Care Service Fund, Student Services Branch, PO Box 9173 Stn Prov Govt, Victoria BC, V8W 9H7, Tel: (250) 356-8380 in Victoria / 660-2610 in the lower mainland / 1-800-561-1818 (toll-free in Canada)

Web: www.avegd.gov.bc.ca/studentservices

Dr. Ken Benson Memorial Bursaries/ British Columbia Associated Boards of Health
Deadline: September 9
Terms of reference: Candidates must be full-time students engaged in post-secondary studies in a field of public/community health practice within an applicable discipline (e.g. nurses, nutritionists, environmental health officers, etc.). Physicians are not eligible for this bursary. Preference will be given to individuals who are resident and practising in BC, who demonstrate a commitment to remain in BC, who commit to live and practise in rural areas of BC. Studies may be undertaken at any post-secondary institution in BC. Consideration will be given to candidates who wish to study out-of-province or out-of-country. Applications must be accompanied by a current C.V., proof of acceptance or enrollment in an appropriate program, future goals and intentions within public/community health and any other relevant information.

Contact: Health Officers’ Council, Fraser Health Authority, 14265 - 56 Avenue, Surrey BC, V3X 3A4.

Web: www.vancouverfoundation.bc.ca/Community/Public%20Health.html

The Norm Bromberger Research Bursary
Deadline: June 30
Terms of reference: The purpose of the bursary is to encourage research in the area of co-operatives and credit union. All applications will be considered, especially those where financial support of the bursary is essential to undertaking the research project. Preference will be given, but not limited, to Saskatchewan candidates.

Contact: Centre for the Study of Co-operatives, 101 Diefenbaker Place, University of Saskatchewan, Saskatoon SK 5T7 5B8, Tel: (306) 966-8509, Fax: (306) 966-8517.

Web: coop-studies.usask.ca
Email: coop.studies@usask.ca

Ullt Patrick Byrne Education Trust Bursary
Deadline: May 14
Terms of reference: Bursaries are awarded based on financial need to assist with undertaking and/or completing programs (on a full time basis) in medicine, law, engineering or nursing. Applicants must be enrolled full-time in undergraduate or graduate courses at either Simon Fraser University, University of British Columbia or University of Victoria. Applicants must have been born and currently reside in British Columbia. Please submit an application with proof of your place of birth.

Contact: Sarah J. H. Forsyth, Compton International Fundraising, 1930 - 777 Hornby Street, Vancouver BC V6Z 1S4.

Email: sforsyth@comptoninternational.com

Cal Callahan Memorial Bursary - Pipe Line Contractors Association of Canada
Deadline: September 30
Terms of reference: A bursary, or bursaries, not exceeding six thousand dollars ($6,000) in total, will be awarded by the Pipe Line Contractors Association of Canada to sons, daughters, or legal wards of persons who derive their principle income from the Pipeline Industry and whose employers are members of the association. To qualify, the parent or guardian of the applicant must be employed by or have a history of employment with an association member firm. The applicant must be enrolled in first year studies at any recognized Canadian university or college in a programme leading to a degree or certificate in any field. Applications may be obtained from the association office at any time but must be supported by transcripts of high school record, evidence of university or college enrollment, and proof of payment, by not later than September 30th.

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Contact: Pipeline Contractors Association of Canada, Suite 201, 1075 North Service Road W., Oakville ON, L6M 2S2, Tel: (905) 847-9383, Fax: (905) 847-7824. Web: www.pipeline.ca
Email: info@pipeline.ca

Canadian Federation of University Women of South Delta
Deadline: May 31
Terms of reference: Bursaries are available to students, twenty years or older, who have completed grade 12 and are registered or planning to enroll at a post-secondary institution. Applicants must be female residents and/or graduate of South Delta (Ladner/Tsawwassen).
Contact: Canadian Federation of University Women’s Club of South Delta, c/o 722 Tsawwassen Beach Road, Delta BC, V4M 2J3. Tel: (604) 948-9609.

Canadian Federation of University Women Parksville/Qualicum - Mature Women Bursaries
Deadline: June 1
Terms of reference: Three bursaries will be awarded to a mature female student from the Parksville/Qualicum area, District 69. Applicant must have been out of school for at least two years and have been accepted by the school or university of her choice.
Contact: The Secretary of the Scholarship Trust, C.F.U.W.- Parksville/Qualicum, PO Box 113, Qualicum Beach BC, V9K 1S7. Web: www.cfuwpq.ca

Hugh Christie Memorial Bursary - YMCA
Deadline: November 15
Terms of reference: A $500 bursary is available to a student who is pursuing a career in Corrections, International Development, Social Work or YMCA, YWCA. The student must be full-time and taking courses in any of the following fields of study: Physical Education, Social Work, Criminology or any directly related fields. Applications must be in writing, giving full particulars together with the reason for applying (in 500 words or less) along with letters of reference.
Contact: Hugh Christie Memorial Bursary Committee, YMCA of Greater Vancouver, #200-1166 Alberni Street, Vancouver BC, V6E 3Z3, Tel: (604) 681-9622, Fax: (604) 688-0220. Web: www.vanymca.org
Email: info@vanymca.org

The Columbia Institute Awards Program
Deadline: March 31, November 30
Terms of reference: The Columbia Institute Awards Program is designed to support the financial needs of adult learners interested in re-training and skills development. To be eligible, candidates must be 24 year of age or older, a BC resident, a Canadian citizen or landed immigrant and not currently enrolled in a training or academic program.
Contact: Awards Program Columbia Institute, #1200-1166 Alberni Street, Vancouver BC, V6E 3Z3, Tel: (604) 408-2500, Fax: (604) 408-2525. Web: www.columbiasstitute.ca
Email: awards@columbiasstitute.ca

Coquitlam Foundation Bursaries
Deadline: February 28
Terms of reference: The applicant must be a resident of the City of Coquitlam, demonstrate financial need, have a history of school and/or community involvement, have achieved good grades, demonstrate an ability to successfully undertake a program of studies, attend an interview with the selection committee, begin designated studies within eight months of formal notification of selection and submit a written report upon completion of applicable term of studies. Students applying must include a letter of application, which should include a statement outlining why the applicant merits the award (financial need), completed application form, a resume, copy of appropriate school transcripts and two letters of reference.
Contact: Grants Committee Chair, Coquitlam Foundation, PO Box 1207 Pinetree Way, Coquitlam BC, V3B 7Y3. Tel: (604) 927-3006, Fax: (604) 927-3015.

Delta Hospital Auxiliary Society Student Bursary
Deadline: May 31
Terms of reference: A bursary is offered to a student who is pursuing a post-secondary education in the healthcare field. Applicants must be involved in entering the field of Health Care and be a current Delta resident for a period not less than two years.
Contact: Delta Hospital Auxiliary Society, Bursary Committee, 5800 Mountain View Boulevard, Delta BC, V4K 3V6. Tel: 604-946-1121 (3212), Fax: 604-946-5741. Web: www.deltahospital.com

Emergency Preparedness for Industry and Commerce Council Bursary (EPICC)
Deadline: June 30
Terms of reference: The Emergency Preparedness for Industry and Commerce Council (EPICC) has established an annual bursary to be awarded to a deserving student undertaking a program of studies which includes at least one emergency management course. Qualification requirements for the bursary are: current study program includes at least one course in emergency management, study program leads to a diploma or a degree at a BC post-secondary institution, financial need, demonstrated involvement in community service, good academic standing, two references and application to include a 500 word essay on the importance of emergency preparedness for the well being of the business community. Preference will be given to EPICC members/employees or their immediately family.
Contact: Mr. Nick Tolunin, EPICC Bursary Committee, Emergency Preparedness for Industry and Commerce Council, 1110-1040 West Georgia Street, Vancouver BC, V6E 4H1. Tel: (604) 687-5522. Web: www.epicc.org Email: epicc@sfu.ca

First Citizen’s Fund Student Bursary Program
Deadline: May 2
Terms of reference: Applicants must be persons of North American aboriginal ancestry and have been resident in BC for at least the previous six months. Applicants must be recommended by a Band Council or an Aboriginal organization (like the UNN), be enrolled in at least a two-year program and maintain at least a C+ average. Out-of-province assistance will be given consideration providing the academic courses or equivalent are not offered in BC or the courses are offered, but all BC facilities are filled. Applications will be considered for each academic year required to attain a degree including additional academic years to attain a master’s degree of the same discipline. In the event a student changes programs, the first academic year in the new program will not be eligible; however, the second and subsequent terms may be considered. Applications must include an application form; self-written letter on family background, tribal ancestry and work history; supporting letter from your Band, recognized First Nations organization, home school coordinator or school counsellor; any additional information pertaining to the application should be included on a separate page.
Contact: BC Association of Aboriginal Friendship Centres. 200 - 506 Fort Street, Victoria, BC V8W 1E6. Tel: (250) 388-5522. Fax: (250) 388-5502. Web: www.boaafc.com

Forest Renewal BC Bursary Program
Deadline: April 30
Terms of reference: Forest Renewal BC Bursary Program is open to graduating grade 12 students attending high schools, regional correspondence schools, or band schools in BC and first and second year students attending post-secondary institutions in BC. Applications for bursaries must include the completed application form and a typed document of no more than 500 words explaining how your ideas or proposed course of study will support sustainable forest development and Forest Renewal BC goals.
Contact: Peg Ainsley, Forest Renewal BC, Bursary Program Administration, Tel: (250) 387-4248, Fax: (250) 356-7114. Web: www.forestrenewal.ca
Email: peg.ainsley@jem1.gov.bc.ca

Hamilton Community Foundation
Deadline: October 1, January 1 & June 1
Terms of reference: Hamilton Community Foundation provides modest financial assistance from various bursary funds established by generous citizens to post-secondary students. Applicants must demonstrate serious financial need; have graduated from publicly-funded secondary schools in the Hamilton Ontario; be registered in attendance at an approved college or university in Canada and be enrolled in full-time undergraduate studies. In special circumstances, part-time or post-graduate studies may be considered.
Contact: Hamilton Community Foundation, 120 King Street West, Suite 700, Hamilton ON, L8P 4V2, Tel: (905) 523-5600, Fax: (905) 523-0741. Web: www.hcf.on.ca
Email: information@hcf.on.ca

Indian/Inuit Health Careers Bursary Program
Deadline: February 15
Terms of reference: Bursaries are available to assist students of Aboriginal ancestry who wish to pursue educational opportunities leading to careers in health professions. Candidates must be Canadian citizens of Aboriginal ancestry who have resided in British Columbia for the last 12 months. Candidates must demonstrate financial need and be acceptable for enrolment in a professional health careers program. A professional health careers program is a post-secondary program in a federally recognized college or university that provides a degree or diploma qualifying graduates for employment in an accredited health care professions, such as medicine, nursing, dentistry, health administration, traditional medicine.
Contact: First Nations Chiefs’ Health Committee, #602-100 Park Royal South, West Vancouver, V7T 1A2. Tel: (604) 913-2080, Fax: (604) 913-2081, Toll-Free: 1-866-913-0033. Web: www.fnhc.ca
Email: johnson@fnhc.ca

Insurance Institute of BC Bursary
Deadline: June 15
Terms of reference: Value at $1500 this bursary is offered annually to students entering third year in the faculty of risk management who completed secondary schooling within British Columbia. It is based on academic standing and financial need. It is available to students transferring into the Faculty of Management from a post-secondary institution of BC. Contact: Insurance Institute of BC, 408 - 800 West Pender St. Vancouver, BC V6C 2V6. Tel: (604) 681-5491, Toll-Free: 1-888-681-5491, Fax: (604) 681-5479. Web: www.iiob.ca

KIN Canada Bursaries - A Program of the Hal Rogers Endowment Fund
Deadline: February 1
Terms of reference: The program was established to promote, encourage and sponsor educational...
programs and activities by providing assistance to applicants in their quest for higher learning at a recognized post-secondary institution. Applicants must be a Canadian citizen or landed immigrant, must plan to enroll in a full-time student in September at a recognized University, Community College, Technical Institute or other post-secondary institution for advanced learning, must demonstrate high ideals and qualities of citizenship and not have previously received a bursary from the Hal Rogers Endowment Fund. Applications must be submitted to a Kinsmen, Kinette, or Kin Club nearest to the applicants’ permanent residence.

Contact: KIN Canada Bursary, c/o Hal Rogers Endowment Fund, 1920 Hal Rogers Drive, PO Box KIN, Cambridge ON, N3H 5C6, Tel: 1-800-742-5546 ext. 215, Fax: (519) 650-1091. Web: www.kinclubs.ca Email: kin@kinclubs.ca

Legal Studies for Aboriginal People – Department of Justice Canada:
Deadline: summer Program: April 1; Three-year Program: June 1

Terms of reference: The LSAP Program is a bursary program for legal studies available to Metis and Non-Status Indian Students. The Program is designed to promote equitable representation of Aboriginal people in the legal profession by providing financial assistance to those who wish to enter and those who currently enrolled in a law school program in Canada. Applicants must be Metis or Non-Status Indian of Canadian Citizenship, living in Canada, who has applied to a Canadian Law School.

Contact: The Legal Studies for Aboriginal People Program, Department of Justice Canada, Programs Branch, 284 Wellington Street, EMS - 6th floor, Ottawa ON K1A 0H8, Toll-Free: 1-888-606-5111. Web: www.justice.gc.ca

The Leonard Foundation Financial Assistance Program
Deadline: March 15

Terms of reference: This award supports students in an undergraduate degree program in Canada if the institution accepts the student, regardless of age or any other prerequisite. The main criterion is based on financial need. All applicants will be considered but preference will be given to sons and daughters of clergy, teachers, military, personnel, graduates of Royal Military College, members of the Engineering Institute of Canada and members of the Mining and Metallurgical Institute of Canada.

Contact: Silver Satz Mutual Bursary Secretary, The Leonard Foundation, 20 Engleforth Avenue West, Seventh Floor, Toronto ON, M4R 2E2, Fax: (416) 361-8711. Email: info@leonardfnd.org/Web: www.leonardfnd.org

MADD Canada Bursary Program
Deadline: May 31

Terms of reference: The program provide financial assistance to Canadian students who have had a parent or guardian killed in an impaired-driving crash and are pursuing any full time post-secondary educational programs that is approved by a provincial Ministry of Education.

Contact: National Youth Services Manager, MADD Canada Bursary Program, 6507C Mississauga Road, Mississauga ON, L5N 1A6, Tel: 1-800-665-6233, (905) 813-9820, Fax (905) 813-9820. Web: www.madd.ca Email: info@madd.ca

David Mason Educational Fund - Queen Alexandra Foundation For Children
Deadline: June 30

Terms of reference: The Former Women’s Auxiliary of the George R. Pearkes Centre for Children (now the Queen Alexandra Centre for Children’s Health in Victoria, BC) established a fund in the name of David Mason, a former student at the Centre. One or more awards will be granted each year. The purpose of the fund is to assist a person with a disability who has been a student at the Centre at one time or another to continue his/her post-secondary education. Monies awarded could be used for tuition fees, books, equipment, transportation, residence and support worker costs.

Contact: David Mason Education Fund, Queen Alexandra Foundation for Children, 2400 Arbutus Road, Victoria BC, V8N 1V7, Tel: (250) 721-6721, Fax: (250) 721-6715. Web: www.queenalexandria.org

Ministry of Education British Columbia - Official Language Programs
Deadline: February 15

Terms of reference: A number of official-language programs are available to residents of British Columbia. Funded by the federal Secretary of State and administered by the provincial Ministry of Education, the following programs are currently available:
• Explore (summer Language Bursary Program) - deadline mid-February (www.cmek.ca/olp)
• Official-Languages Study Fellowship (www.bcuc.fed.ca/olp/olfhs.html)
• Minority Language Interprovincial Travel Bursary (www.bcuc.gov.bc.ca/frenchprograms/olfg.htm)
• Accent (Official-Language Monitor Program) - deadline mid-February (www.cmek.ca/olp)
• British Columbia/Quebec Six-month Bilingual Exchange Program (apply through participating schools)
• French Teachers’ Bursary Program (www.bcuc.gov.bc.ca/frenchprograms/olfg.htm)

Contact: Provincial Coordinator Federal-Official-Languages Programs, French Programs, Ministry of Education, PO Box 9160 Stn Prov Govt, Victoria BC, V8V 9H3, Tel: (250) 356-0256, Fax: (250) 387-1470. Web: www.cmec.ca/olp/ www.bcuc.gov.bc.ca/frenchprograms/

Bill and Elsie More First Nations Bursary
Deadline: October 1

Terms of reference: Bursaries are available to assist First Nations students attending any university or college in BC. Amount of bursary is based on need. Bursary amount is $1,000 and may be divided between more than one students.

Contact: The Bill and Elsie More First Nations Bursary Fund, Attention: Dr. Art More, c/o Department of Educational Planning, Simon Fraser University, BC 2125 Main Mall, Vancouver BC, V6T 1Z4, Tel: (604) 822-8229, Fax: (604) 822-3302.

National Aboriginal Achievement Foundation
Deadline: May 1

Terms of reference: Health Canada selected NAFF to administer its health careers scholarship and bursary program that assists Canadian resident students of Aboriginal ancestry to pursue education opportunities leading to professional health careers. Scholarships and bursaries are available to students who are studying in health sciences such as: nursing, medicine, dentistry, pharmacy, lab technology, physiotherapy, dietetics, health administration, public health policy.

Contact: The National Aboriginal Achievement Foundation, Suite 33A, 70 Yorkville Avenue, Toronto ON, M5R 1B9, Tel: (416) 926-0775, Toll Free: 1-800-329-9780, Fax: (416) 926-7554. Web: www.naaff.ca Email: education@naaff.ca

National Aboriginal Achievement Foundation
Deadline: September 1

Terms of reference: Bursaries of $600 are available to sons, daughters and legal wards of past or present members of Pacific Coast Fisherman’s Mutual Marine Insurance Company. Applicants must be enrolled full time at a post-secondary educational institution.

Contact: Pacific Coast Fisherman’s Mutual Marine Insurance Company, #220-4259 Canada Way, Burnaby BC, V5G 1H1, Tel: (604) 438-4240. Web: www.pacificmarineinsurance.ca

Pacific Salmon Foundation Stewardship Community Bursary
Deadline: September 30

Terms of reference: A bursary is awarded annual to BC students who are active volunteers in the aquatic stewardship community, demonstrate financial need, and are registered full-time (minimum 12 credit hours) in the second year of an education or training program that supports their goal of a career in salmon recovery.

Contact: Pacific Salmon Foundation, Stewardship Community Bursary, Suite 300, 1682 West 7th Avenue, Vancouver BC, V6J3S6, (604) 684-7664. Web: www.psf.ca/bursary

Peterhouse-Cambridge Friends of Peterhouse Bursary
Deadline: April 1

Terms of reference: Peterhouse offers a bursary to a well-qualified graduate student from overseas who is not already a resident member of the College and who wishes to read for an undergraduate degree as an affiliated student of to pursue a one-or-two-year taught course as a registered graduate student. The bursary is intended to assist towards the cost of study at Cambridge. Candidates should be under 25 years of age on December 1. Candidates must be graduates of a university in the United Kingdom or elsewhere. They must intend to be candidates for a degree in the University of Cambridge. Tenure of the bursary is subject to the condition that the elected student be admitted for a place, if an Affiliated Student, at Peterhouse; if intending to read for a graduate degree by Peterhouse and by the Board of Graduate Studies of the University of Cambridge. The bursary may only be held at Peterhouse.

Contact: Senior Tutor, Peterhouse, Cambridge, CB2 1RD, England.
Web: www.pet.cam.ac.uk

Pilot Foundation Fine Arts Bursary
Deadline: September 30

Terms of reference: The Pilot Foundation, in order to encourage the study and use of French in the province, is pleased to offer bursaries to students pursuing studies in any of the fine arts who either use French in daily communication or who have studied French sufficiently to be at ease in the language.
Candidates should send a dossier containing a letter in French outlining his or her linguistic background, details of previous courses and studies, and a letter of recommendation from a teacher who is willing to undertake the instruction of children with communication disorders, a person to undertake professional training for work in the field of communication disorders. Applicants must attach with their application form, a transcript of grades or other certificates, letters of reference attesting to previous achievements and character (from teachers or other persons who have knowledge of the applicant), and a brief autobiography including academic and extracurricular achievements and plans for future involvement in the fields of hearing and speech or communication disorders, or with the deaf community.

Contact: M. Walter Herrig, Secrétariat des Bourses, La Fondation André Piolat, 1575 Avenue, 7ème ouest, Vancouver BC, V6J 1S1, Tel: (604) 230-6339.

The Pisasio Bursaries
Deadline: September 25
Terms of reference: Bursaries in the amount of $500 are available each year. Applicants must be accepted for admission to a university, be a full-time student working toward an undergraduate degree or graduate degree from the university, have completed a minimum first year of university studies. The awards will be given, first to eligible applicants who are residents of the City of Nelson, second to eligible applicants who are residents of an area within a 50 mile radius of City of Nelson and third, to eligible applicants who live in the East or West Kootenay regions.

Contact: The Pisasio Scholarship Trust, 421 Baker Street, Nelson BC, V1L 4H7.
Email: info@poulinaigencies.com

Dr. John D.E. Price Bursary
Deadline: June 18
Terms of reference: The bursary provides funding for education and training purposes to kidney patients. Applicant must be a resident of British Columbia, eighteen years or older and a pre-dialysis, dialysis or kidney transplant patient. Spouses and dependent children are also eligible. Previous recipients are welcome to re-apply.

Contact: The Kidney Foundation of Canada, BC Branch, 320 - 1600 West 6th Avenue, Vancouver BC V6J 1R3 Tel: (604) 736-9775, 1-800-567-8112 extension 230, Fax: (604) 736-9703, 1-800-667-8871.
Web: www.kidney.bc.ca
Email: info@kidney.bc.ca

The Public Trustee (PGT) Educational Assistance Fund
Deadline: April 15
Terms of reference: Public Trustee Educational Assistance Fund bursaries are awarded annually in conjunction with the Ministry for Children and Families from a limited fund to high school graduates who are over 19 years old and pursuing a post-secondary academic, technical or vocational program. These bursaries are only available to former permanent wards of the Ministry for Social Services and those formerly in continuing custody of the Ministry for Children and Families of the Province of British Columbia. These bursaries assist recipients to further their academic or vocational goals by supplementing existing funding to cover shortfalls which otherwise might cause the individual to terminate their studies prematurely. Applicants must have other sources of funds.

Contact: Personal Trust Administrator, Public Guardian and Trustee of British Columbia, 700-808 West Hastings Street, Vancouver BC, V6C 3L3.
Web: www.trustee.bc.ca

Quota International District 11 Speech and Hearing Bursary
Deadline: April 30
Terms of reference: This bursary is in the amount of $1,000 and is available to assist a person with communication disorder to receive instruction, a teacher who is willing to undertake the instruction of children with communication disorders, a person to undertake professional training for work in the field of communication disorders. Applicants must attach with their application form, a transcript of grades or other

Northern Residents Scholarships - Canadian Northern Studies Trust
Deadline: January 31
Terms of reference: The bursaries are given to persons who are northern residents and in need of financial assistance to engage in an educational experience at a degree granting institution in Canada. It is the objective of these awards to permit individuals who were born and raised in northern Canada to undertake studies at a college or university, leading to a diploma or degree in a field of concern to themselves and other people in the North.

Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 6J6, Tel: (613) 562-0515, Fax: (613) 562-0533.
Web: www.acuns.ca

Judge Brian Stevensoon Bursary Fund
Deadline: September 30
Terms of reference: The purpose of the fund is to assist blind youth in continuing their post-secondary education. Judge Stevenson served as International President of the International Association of Lions Clubs in 1987-1988. This bursary will make available financial grants of from $300 to $500 to legally blind Canadians pursuing post-secondary studies with strong career aspirations. Grants will be made based on financial need and career goals.

Contact: Judge Brian Stevenson Bursary Committee, The W. Ross MacDonald School, Brantford ON, N3T 3J9.
Web: wrossmacdonaldschool.on.ca

Barry Sullivan, Q.C. Memorial Bursary
Deadline: November 30
Terms of reference: The Barry Sullivan, Q.C. Memorial Bursary is available to anyone pursuing a degree in one of the following disciplines, law, education, and social work. Successful applicants should meet the following criteria: 1) Be enrolled in a degree granting post-secondary institution in BC; 2) Be enrolled full time, 3) Have completed their first year of studies. Graduate students are welcome to apply. 4) Should demonstrate strong/high academic standing at the post-secondary level, 5) Should display financial need, 6) Should be involved with volunteer work, community organizations, or in extra curricular activities outside of school, 7) Should display some work experience. Application should include an application form, minimum two reference letters, transcripts, a yearly budget outlining financial need and a list of financial awards received in the past four years.

Contact: Office of Directors, c/o Barry Sullivan, Q.C. Memorial Bursary Society, 425 Donald Street, Coquitlam BC, V3K 3Z9, Tel: (604) 939-2988.
Email: liannessullivan@hotmail.com

Surrey/White Rock University Women's Club Bursary Foundation
Deadline: September 2
Terms of reference: The Surrey/White Rock University Women's Club Bursary Foundation offers bursaries for women who are either entering the third year or higher of a degree program at a recognized University and who have graduated from a Secondary School in Surrey or White Rock (School District 36), or a mature student entering the third year or higher of a degree program at a recognized University who has been a resident in the Surrey/White Rock area for the immediately preceding five years.

Contact: Surrey White Rock Bursary Foundation, Box 75143, White Rock BC, V4B SLB, Tel: (604) 5538-8210.
Web: www.cfuw-wrsurrey.org

THEO BC Bursary Fund
Deadline: unknown
Terms of reference: A bursary fund has been established for individuals who wish to enter or
continue post-secondary training, have a mental health diagnosis, meet THEO BC’s entrance criteria, and are in need of financial assistance. The bursaries can be applied to full or part-time programs leading to a recognized certificate, diploma or degree in public or private post-secondary settings. Academic, trade and technical programs will be assessed equally.

Qualified students may apply for a second year.

Contact: THEO BC, Administrative Assistant, 1100-112 East 3rd Avenue, Vancouver BC, V5T 1C8, Tel: (604) 872-0770, Fax: (604) 873-1758.

Web: www.thebcc.org

University Women’s Club of the Comox Valley Bursary

Deadline: July 1

Terms of reference: A $5000 bursary is offered to a female graduate of a Comox Valley high school program who has completed at least one year of study in an accredited course at a Canadian university or college.

Contact: Jane Bush, Secretary Bursary Committee, 1270 Mayfair Road, Comox BC, V9M 4C2, Tel: (250) 339-9985.

Email: bush@mars.ark.com

External Bursaries for Applied Sciences Students

Division of Engineers and Geoscientists for the Forest Sector Bursaries

Deadline: May 13

Terms of reference: The Division of Engineers and Geoscientists in the Forest Sector (DEGIFS) is pleased to offer bursaries, aimed at advancing forest engineering and geoscience/geotechnique education in BC. The bursaries are intended to provide nominal financial assistance to students, in an accredited post-secondary or post-graduate program at a degree-granting institution in BC. Applicants must be enrolled in at least the third year of a program or any year of a post graduate program directly related to the practice of forest engineering and/or geoscience/geotechnique, leading to membership in the APEG of BC. Applicants must submit a covering letter, an official transcript and a paper/essay on any topic related to the field of forest engineering and/or forest geoscience/geotechnique.

Contact: DEGIFS Bursary Sub-committee, c/o APEGBC, 200-4010 Regent St., Burnaby BC, V5C 6N2.

Web: www.degifs.com

James M. Harrison Bursary

Deadline: June 1

Terms of reference: The objective of this bursary is to assist a student from the Northwest Territories to obtain an education in the natural sciences to be applied to future work in the Northwest Territories. Selection is based upon future aspirations of the applicant for a career within the Northwest Territories, academic record and financial need. Applicants must be entering graduate school or in third or fourth year of undergraduate studies as a full-time student in the natural sciences at a Canadian University or College or the University of Alaska. Applicants must also have been resident in the Northwest Territories for at least five years.

Contact: Scientific Services, Aurora Research Institute, 191 MacKenzie Road, Box 1450, Inuvik, NT X0E 0T0, Tel: (867) 777-3298, Fax: (867) 777-4264.

Web: www.nwtresearch.com

The Wood Bursary - The Women’s Association of the Mining Industry of Canada, Toronto

Deadline: June 4

Terms of reference: Awarded to students with financial need for tuition fees and books at a duly qualified school of mining in Canada in the amount of $6,000. These scholarships are for well-rounded students with a “B” or better average pursuing careers in the Mining Industry. The scholarship is available for undergraduate studies and can be renewed up to four years providing the scholar maintains good academic standing and the need prevails.

Contact: The Women’s Association of the Mining Industry of Canada Foundation, Toronto, The Wood Bursary, 19 Ravine Drive, Port Hope ON L1A 4G8.

Web: http://www.pdac.ca/wamic/index.html

External Bursaries for Arts and Social Sciences Students

National Aboriginal Achievement Foundation Fine Arts Program

Deadline: March 31 & September 30

Terms of reference: The NAFF continues its support of Aboriginal students who enrolled in undergraduate and graduate programs at accredited Canadian universities or technical colleges in fields such as visual or media arts, music, theatre, dance, and other creative pursuits that support fine arts, activities such as arts administration, stage management, or sound engineering, as well as marketing studies and such other studies that promote the self-employment and entrepreneurial skills of the arts.

Contact: The National Aboriginal Achievement Foundation, Suite 33A, 70 Yorkshire Avenue, Toronto ON, M5R 1B9, Tel: (416) 926-0775, Toll Free: 1-800-329-9780, Fax: (416) 926-7554.

Web: www.naff.ca

Email: education@naff.ca

External Bursaries for Science Students

Division of Engineers and Geoscientists for the Forest Sector Bursaries

Deadline: May 13

Terms of reference: The Division of Engineers and Geoscientists in the Forest Sector (DEGIFS) is pleased to offer bursaries, aimed at advancing forest engineering and geoscience/geotechnique education in BC. The bursaries are intended to provide nominal financial assistance to students, in an accredited post-secondary or post-graduate program at a degree-granting institution in BC. Applicants must be enrolled in at least the third year of a program or any year of a post graduate program directly related to the practice of forest engineering and/or geoscience/geotechnique, leading to membership in the APEG of BC. Applicants must submit a covering letter, an official transcript and a paper/essay on any topic related to the field of forest engineering and/or forest geoscience/geotechnique.

Contact: DEGIFS Bursary Sub-committee, c/o APEGBC, 200-4010 Regent St., Burnaby BC, V5C 6N2.

Web: www.degifs.com

James M. Harrison Bursary

Deadline: June 1

Terms of reference: The objective of this bursary is to assist a student from the Northwest Territories to obtain an education in the natural sciences to be applied to future work in the Northwest Territories. Selection is based upon future aspirations of the applicant for a career within the Northwest Territories, academic record and financial need. Applicants must be entering graduate school or in third or fourth year of undergraduate studies as a full-time student in the natural sciences at a Canadian University or College or the University of Alaska. Applicants must also have been resident in the Northwest Territories for at least five years.

Contact: Scientific Services, Aurora Research Institute, 191 MacKenzie Road, Box 1450, Inuvik, NT X0E 0T0, Tel: (867) 777-3298, Fax: (867) 777-4264.

Web: www.nwtresearch.com

The Wood Bursary - The Women’s Association of the Mining Industry of Canada, Toronto

Deadline: June 4

Terms of reference: Awarded to students with financial need for tuition fees and books at a duly qualified school of mining in Canada in the amount of $6,000. These scholarships are for well-rounded students with a “B” or better average pursuing careers in the Mining Industry. The scholarship is available for undergraduate studies and can be renewed up to four years providing the scholar maintains good academic standing and the need prevails.

Contact: The Women’s Association of the Mining Industry of Canada Foundation, Toronto, The Wood Bursary, 19 Ravine Drive, Port Hope ON L1A 4G8.

Web: http://www.pdac.ca/wamic/index.html

Externally Administered Awards

The following awards are not administered by Simon Fraser University. The information is intended for general reference only; it may be subject to change. The student is responsible for enquiring and applying through the appropriate agency as indicated in the description.

External Awards for All Students

Arctic Co-operative Award - Canadian Northern Studies Trust

Deadline: January 31

Terms of reference: This objective of the award is to encourage individuals undertake studies which contribute to the understanding and development of Arctic Co-operatives in Nunavut, the Northwest Territories, and/or northern Manitoba. Such studies may result in a paper or thesis on the subject. The award may be held concurrently with a Canadian Northern Studies Trust Special Bursary for Northern Residents. Applicants must be Canadian citizens or permanent residents of Canada, and enrolled at a recognized Canadian community college or university. In making the selection for the award, preference will be given to northern residents.

Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.

Web: www.acuns.ca

Email: awards@acuns.ca

As Prime Minister Awards

Deadline: June 4

Terms of reference: The As Prime Minister Awards program invites university, college and CEGEP students to write an essay in response to the question “If you were the Prime Minister of Canada, what political vision would you offer to improve our living standards and ensure a secure and prosperous global community?” Student essays are judged on the merits of practical, solution driven and innovative proposals that demonstrate defensible, realistic visions and ideas. Recognition of your extra-curricular activities, academic grades and essay composition will also be reviewed. Applicants must be full-time students at an accredited Canadian college or university. Submit a maximum 2,500-word essay in either official language. You may choose to register and submit your essay electronically on-line at www.asprimeminister.com. You may submit your essay type-written on 8.5”x11” paper. Additional rules and regulations can be obtained on the website.

Contact: Magna for Canada Scholarship Fund, 337 Magna Drive, Aurora ON L4G 7K1, Tel: 1-866-278-4376, (905) 726-2462, Fax: (905) 726-7177.

Web: www.asprimeminister.com

Associated Medical Services Bioethics Studentship

Deadline: January 15

Terms of reference: The Associated Medical Services Inc., through the Bioethics Program, provides outstanding individuals, registered in an
undergraduate degree program in the health sciences, arts and science or the science disciplines, with an opportunity to pursue an interest in bioethics. Students must be Canadian citizens or permanent residents and registered in a recognized undergraduate program at a Canadian university. Any full-time undergraduate student is eligible to apply provided the proposed project and supervisor meet the criteria. Research should be related to, but not limited to the following areas: beginning and end of life issues, managed care and health care reform, corporate entities and how they relate to organized or managed care, ethics of the healthcare profession, bioethics education, and ethics of human research. The project should be closely supervised full-time research experience. It should not be for academic credit nor should it represent work already undertaken or submitted for academic credit.

Contact: Associated Medical Services, Inc., 162 Cumberland Street, Suite 228, Toronto ON, M5R 3N5 Canada. Tel: (416) 924-3368, Fax: (416)323-3338
Web: www.ams-inc.on.ca
Email: grantsof@ams-inc.on.ca

Canada Council For the Arts Molson Prizes

Deadline: May 28

Terms of reference: The British Columbia Press Council wants young British Colombians to think about the press and the important role journalism plays in a free democratic society. The BC Press Council Prize has established - two awards of $1,000 each for essays submitted by both secondary and post-secondary students in the province. Two categories: 1) high school students, will have a 1,500 word limit; and 2) college and university students, will have a 2,500 word limit. Entries must be typed, double-spaced and presented in the form of a formal essay.

Contact: British Columbia Press Council, 201-1290 Broad Street, Victoria BC, V8W 2A6, Tel: (250) 384-3344.
Web: www.bcppresscouncil.org
Email: council@bcpresscouncil.org

Canadian Cystic Fibrosis Foundation summer Student Research Program

Deadline: February 1

Terms of reference: This program provides support for a student to work on a cystic fibrosis project during the summer term. Full-time students pursuing an undergraduate degree in an appropriate discipline are eligible to receive this award.

Contact: Medical/Scientific Advisory Committee, Canadian Cystic Fibrosis Foundation, 2221 Yonge Street, Suite 601, Toronto ON, M4S 2B4, Tel: (416) 485-9149, 1-800-378-2293, Fax: (416) 485-0960.
Web: www.cysticfibrosis.ca
Email: info@cysticfibrosis.ca

Canadian Dam Association Scholarship Program

Deadline: unknown

Terms of reference: The Canadian Dam Association (CDA) is inviting graduate and final-year undergraduate students to submit a two-page summary of their current research on the topic of dams and appurtenant structures. The summary can relate to one of the following topics: dam safety, earthquake and flood response, risk analysis, materials and construction aspects, ageing and rehabilitation techniques, environmental and social impact, financing and economics of hydraulic projects, tailings dams. In addition, a one-page introductory text must indicate the motivation of the student to participate at the CIGB-ICOLD Congress. A committee will review the submissions by students and accept those whom the committee deems the best. Candidates must be Canadian and must be Canadian citizens or permanent residents of Canada and must be registered in, or have an interest in, a recognized institution of higher learning. A committee will review the submissions by students and accept those whom the committee deems the best. Candidates must be Canadian and must be Canadian citizens or permanent residents of Canada and must be registered in, or have an interest in, a recognized institution of higher learning.

Contact: The Secretary of the Scholarship Trust, FAX: 613-398-4111, Tel: (514) 398-7437.
Web: www.canada-sandinavia.ca

Centennial Flame Research Award for Persons with Disabilities

Deadline: unknown

Terms of reference: The recipient of the Award will have one year in which to prepare a report focusing on the public achievements of one or more disabled Canadians. Any Canadian citizen with a disability wishing to apply for the Award should submit an outline of his or her proposed research project to the Clerk of the Committee. The research report for the Centennial Flame Research Award must deal with the contribution of a disabled person (or persons) to public life in Canada or the activities of Parliament.

Contact: Sub-Committee on the Status of Persons with Disabilities, Standing Committee on Human Resources Development and Status of Persons with Disabilities. House of Commons, Ottawa ON, K1A OA6
Web: www.parl.gc.ca/cppd/work/centennial_e.asp

Roger Charest, Sr. Award for Broadcast & Media Arts (URDC)

Deadline: November 30

Terms of reference: This award is available to any qualified applicant (individual or group) who has taken the initiative to create a special program or series which may later be suitable for broadcast, and may further the cause of multiculturalism in Canada. The final product may provide a window into the particular characteristics and unique qualities of a given identifiable group within the Canadian cultural mosaic.

Contact: The Secretary of the Scholarship Trust, C.F.U.W. - Parksville/Qualicum, P.O. Box 113, Qualicum Beach BC, V9K 1S7.
Web: www.cfuwpq.ca

Canadian Federation of University Women Parksville/Qualicum - Grace D’Arcy Memorial Award

Deadline: June 1

Terms of reference: The award is open to women from the Parksville/Qualicum area, District 69 who are entering their second year of study or beyond in a university academic program and have been accepted by a Canadian university.

Contact: The Secretary of the Scholarship Trust, C.F.U.W. - Parksville/Qualicum, P.O. Box 113, Qualicum Beach BC, V9K 1S7.
Web: www.cfuwpq.ca
Contact: Ukrainian Resource and Development Centre (URDC), Grant MacEwan Community College, Box 1796, Edmonton AB, T5J 2P2, Tel: (403) 497-4374, Fax: (403) 497-4377. Web: www.gmcuc.ab.ca/ru/urdc/scholars.htm

Sheldon Chumir Internship in Ethics in Leadership
Deadline: March 14
Terms of reference: Applications are invited from senior students or graduates in programs in any field relevant to Ethics in Leadership for an internship, sponsored by the Sheldon Chumir Foundation for Ethics in Leadership. Candidates should display a deep understanding of ethics in leadership and public life together with imagination and creativity of thought, demonstrated experience working with the community, strong organizational skills, superior writing skills and a personal commitment to the Foundation’s mission. Applications should include: (1) a curriculum vitae; (2) a brief essay (not more than 1500 words) describing the applicant’s interest in and views on Ethics in Leadership, how this subject is related to his/her academic program and career plans, and what ideas, knowledge and skills the applicant would bring to the work of the Foundation; (3) names and contact information for three referees who have been asked to send letters of support directly to the Foundation.
Contact: The Sheldon Chumir Foundation for Ethics in Leadership, Suite 970, 1202 Centre Street S., Calgary AB, T2G 5A5, (Tel): (403) 244-6666, (Fax): (403) 244-5596. Web: www.chumirethicsfoundation.ca
Email: info@chumirethicsfoundation.ca

DAAD German Academic Exchange Service Undergraduate and Graduate Scholarship for Study/Research
Deadline: October 2
Terms of reference: The German Academic Exchange Service (DAAD) offers Annual Grants to highly qualified graduate students and graduating seniors for study and/or research at universities in the Federal Republic of Germany. Applicants must be United States or Canadian citizens enrolled full time at DAAD partner institutions. Applicants should also possess a working knowledge of the German language. Scholarships are granted for ten months (October - July).
Contact: DAAD German Academic Exchange Service, 950 Third Avenue, New York, NY10022, Tel: (212) 758-3233, Fax: (212) 755-7800. Web: www.daad.org
Email: daadny@daad.org

Dalton Camp Award
Deadline: March 31
Terms of reference: The award was established by Friends of Canadian Broadcasting to encourage and recognize excellence in essay-writing on the link between democratic values and the quality of the media in Canada. Consult rules and entry details on website.
Contact: Friends of Canadian Broadcasting, Box 200/258 131 Bloord Street West, Toronto ON, M5S1R8, (Fax): (416) 968-7406. Web: www.daltoncampaward.ca
Email: submission@daltoncampaward.ca

Davies Charitable Foundation Fellowship Proposal
Deadline: April 15, October 15
Terms of reference: Established by the Davies Charitable Foundation and awarded on the basis of academic excellence for a year of study/research at the post-doctoral or fellowship level. Applicants must have been born in the Kingston, Ontario area or have resided in the area for at least five years prior to the student’s 20th birthday. The fellowship is tenable in all disciplines and at the University of the student’s choice.
Contact: The Davies Charitable Foundation, 245 Alvington Place, Kingston ON, K7L 4P9, Tel: (613) 546-4000 or 1-800-472-4796. Web: www.daviesfoundation.ca
Email: daviesfoundation@cogeco.ca

The Duke of Edinburgh’s Award
Deadline: unknown
Terms of reference: The Duke of Edinburgh’s Award is an international youth program for ages 14-25. The program opens to all young people. Participants can do the Award as a member of a youth group/organization or they can work on the award as an independent.
Contact: The Duke of Edinburgh’s Award, 4086 Shellbourne Street, Victoria BC, V8N 4P6, Toll-Free: 1-888-881-7788. Web: www.jukeofedf.org

Excellence in Canadian Work-Family Research Awards - Centre for Families, Work and Well-Being
Deadline: May 15
Terms of reference: The purpose of the awards is to encourage the development of the literature in work and family, to increase knowledge of interdisciplinary efforts, and to support and encourage new scholars in the Canadian context. All students registered at Canadian Universities, who have written a paper on a topic related to work-family issues in the Canadian (or comparative) context, are eligible for these awards.
The first place authors will receive $1000 for best undergraduate paper, and $2000 for best graduate paper. A minimum of two faculty members must review and recommend a student’s paper for submission. As a condition of the award, the successful recipient will grant the Centre for Families, Work & Well-Being permission to reprint the article in a future publication.
Contact: Linda Hawkins, Executive Director, Centre for Families, Work & Well-Being, Room B23, MacDonald Institute, University of Guelph, Guelph ON, N1G 2W1, Tel: (519) 824-4120, ext. 3829, Fax: (519) 823-1388. Web: www.worklife.canada.ca
Email: lhawkin@uoguelph.ca

J. Douglas Ferguson Historical Research Foundation
Deadline: October 15
Terms of reference: The J. Douglas Ferguson Historical Research Foundation offers two competitions for student essays. One award for $1000 will be made to the author of the best post-grad essay and two others, for $750 each, will go to the undergraduates who write the best essays. To be eligible for an award, applicants must either be enrolled in a post-graduate program (MA, MSc or PhD) or undergraduate program (BA, BSc) at a Canadian university. The essays should have significant relevance for numismatics. This would include essays in history, art history, archaeology or classics for which coins, tokens, jetons, paper money, cheques or medals provide an important source of evidence as well as essays in banking history, monetary history, medallic art, banknote engraving, or the technology and metallurgy of coinage. Although students are encouraged to select topics relevant to Canadian numismatics, essays on ancient, medieval, or modern international topics are also eligible. The essays may have been submitted in a course or may represent new work. Include also a short resume. Winning essays in both categories will be published in the Canadian journal most relevant to their topics.
Contact: The J. Douglas Ferguson Historical Research Foundation, 654 Hiawatha Blvd., Ancaster ON, L9G 3A5.

The Foundation for the Advancement of Aboriginal Youth
Deadline: October 14
Terms of reference: These awards are given to a student or returning student of Aboriginal descent and residents of Canada. Applicants must be enrolled and accepted in a first, second, or third year college or university program, preferably in the areas of business, accounting, marketing, medical or technology. Consideration will be given to applicants who have made contributions to their community by volunteering or providing a leadership role for educational goals and a potential career choice in the future. Application should include copies of recent transcripts; a completed registration form; two letters of reference (no relatives), one personal and one academic, and a letter from an educational institution indicating confirmation of registration or a photocopy of school application form.
Contact: The Foundation for the Advancement of Aboriginal Youth, 204A St. George Street, 2nd Floor, Toronto ON, M5R 2N5, Tel: (416) 961-8663, Fax: (416) 961-3995, Toll Free: (800) 465-7078. Web: www.ccab.com
Email: fasyinfo@ccab.com

The Canada-U.S. Fulbright Program
Deadline: unknown
Terms of reference: Canada-US Fulbright awards offer scholars in Canada and the United States a unique opportunity to explore questions relating to the study of Canada and the US and the relationship between the two countries. Applications in the following areas are especially encouraged: Canada-US relations, Canadian studies, public policy, including those areas of science, technology and health that bear on the program’s mission, international trade, North American economic integration, urban and regional planning, communications, culture, ecology and the environment, indigenous issues, law and border issues.
FULBRIGHT SCHOLAR AWARDS are for faculty members, post-doctoral researchers and experienced professionals who wish to lecture, conduct research or undertake a combination of both activities at an American or Canadian institution.
FULBRIGHT STUDENT AWARDS are intended for graduate students, prospective graduate students, graduating seniors and junior professionals who wish to study or conduct research at an American or Canadian institution.
FULBRIGHT-FOAS ECOLOGY AWARDS provides funding for Canadians interested in pursuing master's or doctoral level studies in environmental studies and sustainable development in the United States. Scholars in the fields of natural sciences, social sciences and public policy are encouraged to apply.
Web: www.fulbright.ca
Contact: Foundation for Educational Exchange Between Canada and the United States of America, 350 Albert Street, Suite 205, Ottawa, ON K1R 1A4, Tel: (613) 688-5540, Fax: (613) 237-2029. Email: info@fulbright.ca

Global Student Entrepreneur Awards
Deadline: March 1
Terms of reference: The program recognizes and rewards entrepreneurial efforts of undergraduates enrolled at universities across the globe. To be eligible an undergraduate student must be enrolled in full time studies at the time of application and be a business owner who has primary responsibility for the management and operations of the for-profit business. Visit website for detailed application information.
Web: www.gsea.org

Global Television Network Aboriginal Peoples’ Internship Award
Deadline: July 29
Terms of reference: This annual Internship Award offers an aboriginal Canadian a challenging opportunity to work in private television, in pursuit of a career in broadcasting. The award, valued at $10,000, places the award recipient in a four month Internship program at any one of the Global Television stations where the award recipient will be paid on a salary basis for the summer. The applicant must be an Aboriginal Canadian, have minimum education at secondary or school graduate, have demonstrated aptitude for, a career in the broadcasting industry, and have strong English language communication skills.

Contact: Global Television Network, 81 Barber Greene Road, Toronto ON, M3C 2A2, Tel: 1-800-387-8001, Fax: (416) 442-3377.
Web: www.canada.com

The Grant For Women Awards - Soroptimist Foundation of Canada
Deadline: January 31
Terms of reference: The Soroptimist Foundation of Canada annually offers several $7500 grants to female graduate students in Canada to assist them with university studies, which will qualify them for careers, which will improve the quality of women’s lives. Applicant must be: 1) a female, 2) a Canadian citizen or landed immigrant, 3) registered in a graduate or graduate level or professional program of studies in an accredited Canadian university, 4) pursuing a course of studies which will lead to a career mainly of service to women, 5) intending to spend a minimum of two years in such a career in Canada 6) intending to use the award in the academic year following receipt of it.

Contact: West Canada, Grant Manager: Jean Violette, 3628 Greenree Lane, North Vancouver, British Columbia V7R 4C4.
Web: www.soroptimistfoundation.ca

Elizabeth Greenshields Foundation Award
Deadline: unknown
Terms of reference: The purpose of the Foundation is to aid artists in the early stages of their careers. Artists are limited to candidates working in the following: painting, drawing, printmaking, sculpture. Work must be representational. Candidates must have already started or completed art school training or demonstrate, through past work and future plans, a commitment to making art a lifetime career. Refer to application form for application instructions. The foundation welcomes applications throughout the year.

Contact: Elizabeth Greenshields Foundation, 1814 Sherborn Street West, Suite #1, Montreal QC, H3H 1E4, Tel: (514) 937-9225, Fax: (514) 937-0141.
Email: egreen@total.net, greenshields@bellnet.ca

Gulf and Fraser Credit Union - Robert F. Long Educational Award
Deadline: September
Terms of reference: The applicant must be a member, a post-secondary student, either full or part-time, with university/college. An official transcript must be submitted.

Contact: Gulf and Fraser Credit Union, 803 East Hastings Street, Vancouver BC, V6A 1T8, Tel: (604) 254-9811, Fax: (604) 254-0215.
Web: www.gfcu.com
Email: inquiry@gfcu.com

Heroes of Our Time
Deadline: June 1
Terms of reference: There are seven awards in the amount of $2,000 each for First Nations citizens at the post-secondary school level who have completed at least one year and have demonstrated exceptional academic abilities. Applicants must be actively involved within the First Nations community.

Contact: Assembly of First Nations Resource Centre, Heroes of Our Time Awards, Suite 1002, 1 Nicholas Street, Ottawa ON, K1N 7B7, Tel: (613) 241-6789, Fax: (613) 241-5806.
Web: www.afn.ca

Holstein Canada Education Awards
Deadline: September 30
Terms of reference: Awards are offered to students who are either members of or son/daughter of members of the Holstein Canada. Applicants must have completed at least one year of study at a university/college. An official transcript must be included with the application.

Contact: Holstein Association of Canada, PO Box 610, 20 Corporate Place, Brantford ON, N3T 5R4, Tel: (519) 756-8300, Fax: (519) 756-9982.
Web: www.holstein.ca
Email: general@holstein.ca

Husky Oil Aboriginal Education Awards
Deadline: May 31
Terms of reference: There are 4 awards in the amount of $3,000 each for students who have lived in B.C., Alberta or Saskatchewan for at least one year prior to applying, who are in need of financial assistance and demonstrate a serious interest in the oil industry. Applicant must include a transcript and a letter of acceptance from the school with the application form.

Contact: Aboriginal Relations, Husky Oil Operations Limited, PO Box 6525, Station D, Calgary AB, T2P 3G7, Tel: (403) 298-6780.
Web: www.huskyenergy.ca

Indian and Northern Affairs Canada Post-Secondary Student Support Program
Deadline: February 28
Terms of reference: To be eligible you must be Inuit or registered as Indian, have lived only in Canada for the past year and have met a university’s or college’s entrance requirements. Up to $2,000,000 has been accepted into university or college for a program of studies. This funding is open to both full-time and part-time students and you must be registered in at least a year-long course to receive funding. Indian and Northern Affairs Canada (INAC) defines the limits of funding every year. You can also apply for the following funding in addition to the above programs:
- Monetary Incentives - for post-graduate or professional degree payments of up to 1,500 for continuing with program.
- Strategic Scholarships - for students of commerce, public or business administration, economics, applied and physical science, mathematics, computer science and engineering scholarships of up to $3,500 annually.
- Academic Achievement Scholarships - undergraduate students who have at least a B average may apply for scholarships of up to $1,000 annually.

Contact: If you have Band Membership, apply to your Band or Tribal Council office. If you are not a Band Member, you can apply at the Native Education Centre, 285 E. 5th Avenue, Vancouver BC, V1T 1H2, Tel: (604) 673-3761, Fax: (604) 673-9152.
Web: www.ainc-inac.gc.ca

Inter-American Development Bank Internship Program
Deadline: January 31
Contact: Inter-American Development Bank, 1300 New York Avenue, NW, Washington, DC 20577, USA.
Web: www.iadb.org

International Initiatives in Deaf Studies Award (URDC)
Deadline: November 30
Terms of reference: Recipient must be a post-secondary student, either full or part-time, whose educational pursuits and/or volunteer work indicates an interest in international initiatives in deaf studies and/or hearing impairment. Students will submit an application and letter detailing their interest in the field, and previous experience with deaf studies or hearing impairment issues. The award will be given to the student upon completion of short-term project work assigned by the Canada Ukraine alliance for Deaf and Hard of Hearing Persons (CUADHHP). The terms of the project work will be established as mutually beneficial for both the recipient and CUADHHP.
Contact: Alice Chumer, Administrative Assistant, Ukrainian Resource and Development Centre, 7-156, 10700-104 Avenue, Edmonton, AB T5J 4S2, Tel: (780) 497-4374, Fax: (780) 497-4377.
Web: www.macewan.ca
Email: chumerma@macewan.ca

Ireland Canada University Foundation Short Term Visiting Scholarships
Deadline: May 31
Terms of reference: These awards are designed principally for young scholars who are currently engaged in research in any discipline which is related to both Ireland and Canada, or who are commencing such research. The funding is available to meet the costs of a three or four week visit to an institution or university in the other country and the precise details for such visits are left to the scholars to decide on and arrange themselves. Applicants can be of any nationality, but must be permanently resident in either Canada or Ireland, and have been in residence for at least five years.
Contact: All information and application forms are available from website.
Web: www.icuf.ie
Email: j.kelly@ucd.ie

Japan Foundation
Deadline: unknown
Terms of reference: The Japan Foundation (Kokusai Koruyu Kikin) was founded in 1972 as a non-profit, special legal entity, in order to further international mutual understanding through the promotion of cultural exchange between Japan and other countries. A wide range of programs is conducted in more than 180 countries. These programs can be categorized as: 1) Support for exchange persons, 2) Support for Japanese-language education, 3) Support for Japanese studies, 4) Support for arts-related exchange and 5) Support for media exchange. Refer to program guide for detail information.
Contact: The Japan Foundation Toronto, 131 Bloor Street West, Suite 213, Toronto ON, M5S 1R1, Tel: (416) 966-1600, Fax: (416) 966-9773 or (604) 684-5868, ext 240.
Web: www.japanfoundationcanada.org
Email: info@jftor.org

The Japan Exchange and Teaching Program (JET)
Deadline: November 19
Terms of reference: The Japan Exchange and Teaching (JET) Program invites young college and university graduates from overseas to participate in international exchange and foreign language education throughout Japan. The JET participants are invited to Japan, and are placed in host institutions throughout the country. The JET participants sign contracts with their host institutions. Contracts are for one year. The JET program offers three types of positions: Co-ordinator for International Relations (CIR), Assistant Language Teacher (ALT) and Sports Exchange Advisor (SEA). For further information, please contact Embassy of Japan or Consulate General of Japan.
Contact: Consulate General of Japan, 800-1177 West Hastings Street, Vancouver BC, V6E 2K9, Tel: (604) 684-5868 ext. 415, 255, Fax: (604) 684-6939.
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Web: www.canada.camb-japan.go.jp
Email: culturalcentre@consuljapan.com

The Killam Program of the Canada Council For The Arts
Deadline: May 16
Terms of reference: The Killam Research Fellowships are offered on a competitive basis to support researchers in any of the following fields: Humanities, Social Science, Natural Science, Health Science, Engineering and studies linking any of the disciplines within these fields.
Contact: Marcelle Menard, Killam Program, The Canada Council for the Arts, 350 Albert Street, P.O. Box 1047, Ottawa ON, K1P 5V8, Tel: 1-800-263-5588, ext. 4231, or (613) 566-4407, Fax: (613) 566-4407.
Web: www.canadacouncil.ca
Email: killam@canadacouncil.ca

Frank Knox Memorial Fellowships Program
Deadline: December 31
Terms of reference: The fellowship will enable students from Canada to spend one academic year at Harvard University. Fields of study include arts and sciences (including engineering), business administration, design, divinity studies, education, law, public administration, medicine, dental medicine and public health. The fellowships are open to Canadian citizens or permanent residents of Canada who have graduated or are about to graduate from an educational institution which is a member, or affiliated with a member, of AUCC.
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca

Kobzar Literary Award - Ukrainian Canadian Foundation of Tara Shevchenko
Deadline: May 13
Terms of reference: The award will recognize outstanding contributions to Canadian literature through the author’s representation of a Ukrainian Canadian theme. Authors must be either Canadian citizens or landed immigrants. Submissions may be tendered in English, French or Ukrainian.
Contact: The Kobzar Literary Award, Ukrainian Canadian Foundation of Taras Shevchenko, 456 Main Street, Winnipeg, MB, R3B 186, Tel: 1-866-524-5314, 204-944-9128, Fax: 204-944-9135.
Web: www.shevchenkofoundation.com
Email: lesia@shevchenkofoundation.ca

Pam Koczapska Memorial Award
Deadline: May 1
Terms of reference: Up to $1,000 awards, the Pam Koczapska Memorial Award will honor students planning a career in education or in any professional field that will benefit the Upper Sto:lo people. Planning a career in education or in any professional field that will benefit the Upper Sto:lo people.
Contact: Pam Koczapska Memorial Award, Suite 927-3015.
Email: pamkoczapskamemorialaward@gmail.com

Kodak Fellowship in Film Preservation - Association of Moving Image Archivists
Deadline: May 1
Terms of reference: The Kodak Fellowship is designed to advance the education and training of a student of merit who intends to pursue careers in the profession of moving image archiving. The applicant must be enrolled in a graduate level or other advanced program of study in film or television studies or production, library or information services, archival administration, museum studies or a related discipline; or must be accepted into such a program for the next academic year.
Contact: AMIA, 1313 North Vine Street, Hollywood, CA 90028, Tel: (323) 463-1500, Fax: (323) 463-1506.
Web: www.amia.net
Email: amia@amianet.org

Michele Landsberg Award - Canadian Women's Foundation
Deadline: March 17
Terms of reference: Awarded to a young woman in Canada (16-30 years of age) to recognize outstanding feminist work in media and/or activism.
Contact: Canadian Women's Foundation, 133 Richmond Street West, Suite 504, Toronto ON, M5H2L3, Tel: (416) 365-1444 extension 221.
Web: www.canadianwomen.org
Email: eburgess@canadianwomen.org

Learning Through Service Program
Deadline: June 30
Terms of reference: The goal of the program is to enable a limited number of Canadian undergraduate students in any field, to undertake a term-long work assignment of international practicalism in a developing country as part of their academic program at a Canadian university. The objective will be to provide hands-on experience of living and working in a developing country, increasing knowledge of development, other cultures, traditions and practices among Canadian students. The program is sponsored by the Canadian International Development Agency (CIDA).
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca

Raymond A. LeClair Memorial Scholarship Award (Coquitlam Foundation)
Deadline: February 20
Terms of reference: The successful applicant must be a resident of the City of Coquitlam, have achieved good academic standing, have a history of school and/ or community involvement, demonstrate an ability to successfully undertake a program of studies, attend an interview with the selection committee, begin designated studies within eight months of formal notification of selection and submit a written report upon completion of the applicable terms of studies. Applications must include a letter of application, which should include a statement outlining why the applicant merits the award, completed application form, a resume, a copy of appropriate school transcript and two letters of reference.
Contact: Grants Committee Chair, Coquitlam Foundation, PO Box 2, 1207 Pinetree Way, Coquitlam BC, V3B 7Y3, Tel: (604) 927-3000, Fax: (604) 927-3015.

Lois McConkey Memorial Fellowship
Deadline: unknown
Terms of reference: This award may be made annually to a student who would benefit from an established work-study program at the Museum of Anthropology, and may be supplemented by other funds when available. To receive more information or to apply, forward a resume and letter of interest to the Museum of Anthropology, and may be supplemented by other funds when available.
Contact: Awards Committee, UBC Museum of Anthropology, 6339 NW Marine Drive, Vancouver BC, V6T 1Z2, Tel: (604) 822-5567, Fax: (604) 822-2974.
Web: www.moa.ubc.ca

The Military and Hospitalier Order of Saint Lazarus of Jerusalem Grand Priority in Canada
Deadline: March 15
Terms of reference: The Military and Hospitalier Order of Saint Lazarus of Jerusalem is sponsoring an essay competition on the subject of Canadian unity. The author of the winning essay will be eligible for an award of $2,000. A second place award of $500 will also be awarded. Essays may be submitted in either official language. Maximum length of 2000 words typed. Entrants must be Canadian citizens or landed immigrants and must be registered students at a Canadian university, college or CEGEP. All entries must be accompanied by the name, address and telephone number of the submitter with proofs of student and citizenship status, a short curriculum vitae and statement of assignment.
Contact: The Military and Hospitalier Order of St. Lazarus of Jerusalem Grand Priority in Canada, 1435 Caledon Place, Suite 100, Ottawa ON K1G 3H3, Tel: (613) 746-5280, Fax: (613) 746-3982.
Web: www.stlazarus.ca
Email: minervaf@telus.net

National Association of Women and the Law Charitable Trust for Research and Education Essay Competition
Deadline: May 31
Terms of reference: The competition, open to full time undergraduate students enrolled in a Canadian university. The objective will be to provide awards for the next academic year. To apply, forward a resume and letter of interest to the Museum of Anthropology, and may be supplemented by other funds when available.
Contact: National Essay Competition, National Association of Women and the Law, Suite 303-1066 Somerset Street, W., Ottawa, ON, K1Y 4T3, Tel: (613) 241-7570.
Web: www.nawl.ca
Email: info@nawl.ca

The Department of National Defence (DND) Security and Defence Forum Deadline: January 1
Terms of reference: The Department of National Defence offers a number of awards in studies relating to current and future Canadian national security and defence issues, including their political, international, historical, social, military, industrial and economic dimensions. Applicants must be Canadian citizens or permanent residents of Canada.

The Military and Hospitalier Order of Saint Lazarus of Jerusalem Grand Priority in Canada
Deadline: March 15
Terms of reference: The Military and Hospitalier Order of Saint Lazarus of Jerusalem is sponsoring an essay competition on the subject of Canadian unity. The author of the winning essay will be eligible for an award of $2,000. A second place award of $500 will also be awarded. Essays may be submitted in either official language. Maximum length of 2000 words typed. Entrants must be Canadian citizens or landed immigrants and must be registered students at a Canadian university, college or CEGEP. All entries must be accompanied by the name, address and telephone number of the submitter with proofs of student and citizenship status, a short curriculum vitae and statement of assignment.
Contact: The Military and Hospitalier Order of St. Lazarus of Jerusalem Grand Priority in Canada, 1435 Caledon Place, Suite 100, Ottawa ON K1G 3H3, Tel: (613) 746-5280, Fax: (613) 746-3982.
Web: www.stlazarus.ca
Email: minervaf@telus.net

National Association of Women and the Law Charitable Trust for Research and Education Essay Competition
Deadline: May 31
Terms of reference: The competition, open to full time undergraduate students enrolled in a Canadian university. The objective will be to provide awards for the next academic year. To apply, forward a resume and letter of interest to the Museum of Anthropology, and may be supplemented by other funds when available.
Contact: National Essay Competition, National Association of Women and the Law, Suite 303-1066 Somerset Street, W., Ottawa, ON, K1Y 4T3, Tel: (613) 241-7570.
Web: www.nawl.ca
Email: info@nawl.ca
CEGEP, offers prizes to the top three submissions. A 1500 word essay, topic TBA, must be submitted by email. For information about entry procedures, regulations and essay topic, please visit website. Email: essaycompetition@roton.utoronto.ca Web: www.romton.utoronto.ca/essaycompetition

Northern Scientific Training Program (NSTP) Deadline: December 1

Terms of reference: The program supports scientific training provided by Canadian universities which gives access to the vast scientific experience in the North and encourages them to development a commitment to northern work. The program aims to increase the number of graduate and senior undergraduate students in Canadian universities who have specialized in some aspect of northern scientific studies and who have northern research experience. Contact: Secretary, Northern Scientific Training Program, Strategic Management and Economic Analysis Directorate, India Affairs and North Development, Ottawa ON, K1A 0H4, Tel: (819) 997-9667, Fax: (819) 994-641. Web: www.aicn-inac.gc.ca/nstp
Email: nstp@aicn-inac.gc.ca

NSERC Aboriginal Student Research Awards Deadline: November 1

Terms of reference: The Natural Sciences and Engineering Research Council of Canada (NSERC) is encouraging Aboriginal participation in four different awards programs. These programs are open to all Inuit, Metis, Status and Non-Status First Nation people.

THE UNDERGRADUATE STUDENT RESEARCH AWARDS (USRA) programs offers qualified undergraduate students the opportunity to work on a challenging research project in a university or industrial environment for up to four months (minimum salary of $4500 for 16 weeks). This is a great summer job opportunity for students registered in an honours bachelor's degree program in natural sciences or engineering.

THE POSTGRADUATE SCHOLARSHIPS (PGS) program provides financial assistance ($17,300 to $19,100 per year) for up to four years to students pursuing a master's or doctoral degree in the natural sciences or engineering.

THE POSTDOCTORAL FELLOWSHIPS (PDF) program provides financial support ($40000 per year) for up to two years to the most promising young researchers in the natural sciences and engineering.

THE UNIVERSITY FACULTY AWARDS (UFA) program is open to any Inuit, Metis, Status and Non-Status First Nation people who are being considered for university faculty positions. This program makes a substantial contribution, for up to five years, to the salary of each successful candidate nominated by a Canadian university.

Contact: Natural Sciences and Engineering Research, Council of Canada, 350 Albert Street, Ottawa ON, K1A 1H5, Tel: (613) 947-0428; Fax: (613) 947-0495.
Web: www.nserc.ca

Email: lgamble@union.net
Lewis Perinbam Award in International Development: Recognizing the Accomplishments of Ordinary Canadians (CBIE) Deadline: September 24

Terms of reference: This award is given to a Canadian in recognition of excellence and imaginative leadership in a social or economic area pertaining to development in the Third World. The award recognizes grassroots achievements in improving life in developing countries and expanding awareness of those countries among the Canadian public. The award seeks to commend individuals who make volunteer contributions to international development rather than those who work in a paid professional capacity in this arena. However, someone who works in the field but undertakes voluntary commitments over and above his or her employment would also be considered for the award.

Contact: The Lewis Perinbam Award for International Development, c/o Canadian Bureau for International Education, Suite 1100, 220 Laurier W., Ottawa ON, K1P 5Z9, Tel: (613) 237-4820, Fax: (613) 961-1096. Web: www.cbie.ca
Email: info@cbie.ca

Peterhouse-Cambridge Research Studentships Deadline: April 1

Terms of reference: The governing body of Peterhouse offers annually a number of Research Studentships, open to men or women who will not normally have been undergraduate members of the college. Candidates should be under 25 years of age on December 1. Candidates must be graduates of a university in the United Kingdom or elsewhere. They must intend to be candidates for the degree of PhD in the University of Cambridge. Studentships may only be held at Peterhouse.

Contact: Senior Tutor, Peterhouse, Cambridge, CB2 1RD, England.
Web: www.pet.cam.ac.uk

Madeline Bronsdon Rowan Endowment Fund Deadline: unknown

Terms of reference: The purpose of this award is to assist in the cost associated with First Nations educational programs at the Museum of Anthropology and may be combined with other awards. This award is suited for First Nations students already engaged in Museum of Anthropology projects, though other applications will also be considered.

Contact: Awards Committee, c/o Anne Marie Fenger, UBC Museum of Anthropology, NW Marine Drive, Vancouver BC, V6T 1Z2, Tel: (604) 822-5567, Fax: (604) 822-2974. Web: www.ubc.ca
Email: info@moa.ubc.ca

Royal Bank Native Student Awards Program Deadline: January 3

Terms of reference: The Royal Bank Native Student Awards Program was launched in 1992 to assist Aboriginal students achieve a post secondary education. Annually, five individuals are selected to receive an award of up to $4,000 for a maximum of four years toward the cost of a university or college education. Some award recipients are also given consideration for post graduate employment in the organization. If you are a Status Indian, Non-Status Indian, Inuit or Metis, you are eligible to apply provided that i) you are a permanent resident/citizen of Canada ii) you can provide proof of acceptance (with transcript of marks) or are already attending a university or college listed in the Directory of Canadian Universities, in a discipline relevant to the banking industry (e.g. business; economics; computer science) iii) you maintain a full course workload leading to a recognized degree, certificate or diploma iv) you are in need of financial assistance to pursue your education.

Contact: Coordinator, Royal Bank Native Student Awards, Human Resources Department, Head Office, Royal Bank Plaza, 200 Bay Street, 11th Floor North Tower, Toronto ON, M5J 2J5, Tel: (416) 955-5824, Fax: (416) 955-5840. Web: www.rbc.com Email: aboriginalstudentawards@rbc.com

Dr. Sawatzky Scholarship Award - Muscular Dystrophy Canada Deadline: June 27

Terms of reference: The purpose of the fund is to provide financial assistance to an exceptional student registered with Muscular Dystrophy Canada in BC or Yukon. Eligible candidates are those who plan to enroll in, or are currently enrolled in a program of undergraduate studies at an accredited degree-granting post-secondary institution in BC. Other factors will include career community involvement, and leisure lifestyle goals.

Contact: The Muscular Dystrophy Canada, 7th Floor, 1410 West Broadway, Vancouver BC, V6H1H6, Tel: (604) 732-8799 extension 224 or 1-800-366-8166. Email: jennifer.scrubb@muscle.ca

Maxine Sevack Memorial Grant Deadline: unknown

Terms of reference: Annual scholarships of $500 are available to Little Sisters or Little Brothers enrolled in post-secondary education who were matched with their Big Sisters by Big Sisters of BC Lower Mainland. Eligibility: any Little Sister or Little Brother who has been a member of Big Sister of BC Lower Mainland for at least one year and has been matched with a Big Sister; is between 17 and 24 years of age; is enrolled in a training or educational program (exclusive of high school) which is at least three months in duration; has completed grade 10 and can demonstrate financial need.

Contact: Big Sisters of BC Lower Mainland, 34 East 12th Avenue, Vancouver BC, V5T 2G5, Tel: (604) 873-4525, Fax: (604) 873-2122. Web: www.bigsisters.bc.ca

The Shastri Indo-Canadian Institute Awards Deadline: unknown

Terms of reference: The Shastri Indo-Canadian Institute (SICI) is a unique educational enterprise which promotes understanding between India and Canada by supporting India studies in Canada and Canadian studies in India. The Institute funds research, links institutions in the two countries, and organizes seminars and conferences. It is named after Lal Bahadur Shastri, the Prime Minister of India from 1964 to 1966 and a distinguished mediator and statesman. The Shastri Indo-Canadian Institute offers the following awards:

• summer Program in India
• Women and Development Awards in India
• Undergraduate Awards
• Language Training Fellowships
• Seed Grants for India Studies
• Faculty Fellowships
• Librarian Fellowships
• Post-Doctoral Fellowships
• Arts Fellowships
• Student Fellowships

Contact: Program Officer, Development Studies, Suite 1100, 220 Laurier W., Ottawa ON, K1A 0H4, Tel: (613) 947-0428; Fax: (613) 947-0495. Web: www.sici.org

Email: info@moa.ubc.ca

The Sisam Forestry Award Deadline: March 31
Terms of reference: The award is open to all full-time undergraduate and graduate students registered at a Canadian university during the award year. The award is granted for an article, written solely by the applicant for the award, dealing with a forestry or forest-environment topic of public interest, e.g., forest ecology, silviculture, wildlife management, forest protection, harvesting operations, parks, conservation or wood science. The article, which may be illustrated, must have been published, in either English or French, in a magazine, trade publication or a daily or weekly newspaper (but not a student publication) at any time in the previous twelve-month prior to the final date for submission to the council.

Contact: The Sisam Forestry Award Admissions and Awards, University of Toronto, 315 Bloor Street West, Toronto ON, M5S 1A3.

Web: www.utoronto.ca

Roman Soltykewych Music Scholarship (URDC)

Deadline: November 30

Terms of reference: This award is available annually to any qualified applicant (individual or group) who is planning to pursue further studies in the field of Ukrainian choral or vocal music. Courses of study or workshop participation, either in progress or recently completed, will be considered.

Contact: Ukrainian Resource and Development Centre (URDC), Grant MacEwan Community College, Box 1796, Edmonton AB, T5J 2P2, Tel: (780) 497-4374, Fax: (780) 497-4377.

Web: www.macewan.ca

Transamerica Life Canada Conductive Education Award

Terms of reference: The award provides $30,000 over three years for the study of a BA (Hons) in Conductive Education at the University of Wolverhampton, England.

Contact: Ontario March of Dimes, 10 Overlea Blvd, Toronto ON, M4H 1A4, Tel: 1-800-263-3463, 416-425-3463, Fax: 416-425-1920.

Web: www.dimes.on.ca

Email: ce@dimes.on.ca

Undergraduate Essay Competition - Education Foundation (CAFP)

Deadline: January 20

Terms of reference: The Education Foundation of the Canadian Association of Former Parliamentarians, in partnership with the Centre for International Governance Innovation, invites undergraduate students from Canadian colleges and universities to enter a national essay competition. Essay, up to 1000 words, be judged on originality, creativity and good substance. The winners will also be invited to Ottawa to receive their prizes and be familiarized with how the Government of Canada functions. For information about entry procedures, regulations and essay topic, please visit website.

Contact: The Education Foundation (CAFP), P.O. Box 768, West Block, House of Commons Ottawa, ON K1A 0A6, Tel: 1-888-567-4764. Web: www.parl.gc.ca/ex-parl Email: ex-parl@parl.gc.ca

Volunteer Recognition Awards

Deadline: December

Terms of reference: Volunteer Vancouver's Volunteer Recognition Awards celebrate the spirit of volunteerism and showcase the voluntary efforts of countless individuals and groups. Recognizing specific individuals or organizations, these awards also focus public attention on the vast spectrum of voluntary service and community participation that sustains the vibrant and caring community in which we live. Awards are presented in different categories: THE VOLUNTEER VANCOUVER AWARD FOR LEADERSHIP: This award is designed to recognize individuals that have demonstrated exceptional leadership in the non-profit sector. THE VOLUNTEER VANCOUVER AWARD FOR INNOVATION: This award is designed to recognize organizations that have furthered their objectives while responding to the changing needs of the community with exceptional creativity and innovation. THE LEADERS OF TOMORROW AWARDS: These awards honour exceptional individuals and use their examples to inspire others to similar service. These awards recognize youth 17 years of age and under, and separately, youth age 18-25 years. THE CARING COMPANY AWARDS: These awards recognize the support for voluntary activity among employees and the financial support provided to community organizations. THE COMMUNITY SERVICE AWARDS: These awards honour volunteers or volunteer groups for their invaluable service and focus public attention on the similar works of countless others. CANADIAN VOLUNTEERISM INITIATIVE AWARDS: The award aims to promote participation in and contribution of Canadians to society.

Contact: Volunteer Recognition Awards, Volunteer Recognition Awards, #207-20465 1C7, Tel: (604) 267-1755; or Louise Dickman, Volunteer Recognition Awards, #207-20465 1C7, Tel: (604) 267-1755; or Louise Dickman, Volunteer Recognition Awards, #207-20465 1C7, Tel: (604) 267-1755.

Web: www.volunteervancouver.ca

Weyerhaeuser Canada Diversity Education Awards

Deadline: June 30

Terms of reference: Weyerhaeuser Canada Diversity Education Awards Program offers up to four financial awards annually which may continue for two to four years, depending on the recipient's program of study. You are eligible to apply if you are: a person of aboriginal ancestry (status and non-status Indian, Metis or Inuit); female; a person with a disability (as defined by the pending Canada Employment Equity Act); or, a member of a visible minority (as defined by the Canada Employment Equity Act). You must also demonstrate acceptance to a recognized BC post-secondary educational institution as a full-time student in a two year diploma or a university degree program.

Contact: Weyerhaeuser Company Ltd. 925 West Georgia Street, Vancouver BC V6C 3L2.

Web: www.weyerhaeuser.com

Elie Wiesel Prize in Ethics Essay Contest

Deadline: December 2

Terms of reference: The Elie Wiesel Foundation for Humanity sponsors an annual essay contest intended to challenge junior and senior students in colleges and universities to focus on ethical questions and issues facing them in a complex and ever-changing world. The essay, in 3000 to 4000 words, may take the form of an analysis that is biographical, historical, literary, philosophical, sociological or theological. Essays must be the original, unpublished work of the student. Entry form and further information can be found on the Elie Wiesel Foundation for Humanity website.

Contact: The Elie Wiesel Prize in Ethics, The Elie Wiesel Foundation for Humanity, 529 Fifth Avenue, Suite 1802, New York, NY 10017, USA, Tel: (212) 490-7777, Fax: (212) 490-6006.

Web: www.eliewieselfoundation.org

The Women's Opportunity Award (Soroptimist International)

Deadline: January 15

Terms of reference: The Women's Opportunity Awards Program was established by Soroptimist International of the Americas in 1972 to assist women seeking to improve their employment status by gaining additional education and skills. Women's Opportunity Awards are designed to provide assistance to women who provide the primary source of financial support for their families. Applicants must: 1) be female head of household, with primary financial responsibility for supporting their families; 2) be attending, or have been accepted to, a vocational/skills training program, or an undergraduate degree program; 3) have financial need; 4) be motivated to achieve their educational and career goals.

Contact: Megan Halpin, Soroptimist International of Vancouver, 1536 East 2nd Ave, Vancouver BC, V5N 1C7, Tel: (604) 287-1755; or Louise Dickman, Soroptimist International of the Langleyes, #207-20465 Douglas Cres. Langley BC, V3A 4B6, Tel: (604) 532-1845; or Ms. Joyce Anderson, Soroptimist International of Burnaby-New Westminster, Tel: (604) 435-4280; or Joan Jeffries, Soroptimist of the Tri Cities, Tel: (604) 938-6572; Ms Eva MacIntyre, Soroptimist International of White Rock, 12719 15A Avenue, Surrey BC, V4A 1L9; or Soroptimist International of North & West Vancouver, c/o Ruth Ditto, 3636 Edgemont Blvd, North Vancouver BC, V7R 2P7, Tel: (604) 989-3192.

Web: www.soroptimist.org

External Awards for Applied Sciences Students

Cable Telecommunications Research Fellowship Program

Deadline: March 28

Terms of reference: The Cable Telecommunications Research Institute has established graduate fellowships to encourage students at the master or PhD level to tackle topics in the engineering of communications systems for video, voice and data signals or for computer applications to cable TV requirements. Candidates must be Canadian citizens or permanent residents and enrolled or planning to enrol in a Canadian university. Candidates must intend to use the fellowship to assist them in completing a graduate degree which includes a thesis on a topic in the engineering of broadband communications systems or computer science. (In this context, a broadband system can be analogue or digital, or a combination, but must be capable of transporting upwards of 10 video channels.)

Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.

Web: www.aucc.ca

Email: awards@aucc.ca

Canadian Society for Chemical Engineers - SNC LAVALIN Plant Design Competition

Deadline: May 15

Terms of reference: The Canadian Society for Chemical Engineering offers the SNC LAVALIN Undergraduate Plant Design Competition for students enrolled in undergraduate chemical engineering programs at Canadian universities. Eligibility: Individuals and groups of undergraduate students registered in chemical engineering programs in Canadian universities. Prize: The group of students with the best design will receive the SNC LAVALIN Inc. Plant Design Award of $1,000. Each member of the team receives a certificate and a two-year subscription of “The Canadian Journal of Chemical Engineering”.

Contact: Canadian Society for Chemical Engineering, #250-139 Slater Street, Ottawa ON, K1P 6E2, Tel: (613) 232-6252, Fax: (613) 232-5862.

Web: www.cheminst.ca

Caribou Research Award - Canadian Northern Studies Trust

Deadline: January 31
Churchill Communication Challenge - Sir Winston Spencer Churchill Memorial Fund
Deadline: April 15

Terms of reference: The annual Churchill Communication Challenge essay/term paper competition, established by the Rt. Hon. Sir Winston Spencer Churchill Society, offers two prizes ($600 and $200) to students majoring in history or political science and international relations. Each university/college may submit up to six essays/term papers selected by faculty members in charge in May/June each year and decision will be made by end of November. The topics of the essays/term papers are not restrictive. They look for topics of contemporary relevance and interest and prefer topics make reference to the statelessness or politics of Churchill, but is not essential.

Contact: The Churchill Society of BC, c/o P.O. Box 93041, West Vancouver, BC V7W 3G4. Tel: (604) 290-0880, Fax: (604) 922-2002
Web: www.winstonchurchhillbc.org

Sergei Eremenko Music Award
Deadline: November 30

Terms of reference: This scholarship is available annually to any qualified applicant (individual or group), who is planning to pursuing further studies in the field of Ukrainian music. Courses of study or workshops, either in progress or recently completed, will be considered.

Contact: Ukrainian Resource and Development Centre (URDC), Grant MacEwan Community College, Box 1796, Edmonton AB, T5J 2P2, Tel: (780) 497-4374, Fax: (780) 497-4377.
Web: www.macaewan.ca

HBK-Savings Bank Prize
Deadline: June 30

Terms of reference: HBK Savings Bank awards a prize in order to encourage the scientific study on workers' financial participation and democracy in enterprises. This study deals with economic (ownership) and/or industrial (participation) democracy in enterprises. Candidates have to hold a university degree. A typewritten or printed copy of their work as well as a curriculum vitae mentioning their studies, degrees, professional activities and publications have to be sent to HBK Savings Bank. The study has to be written in one of the following languages: English, French, German or Dutch.

Contact: HBK-Banque d'Epargne, Lange Loozanastraat 250, B-2018 Antwerpen, Belgium. Tel: 32-3-2475501, Fax: 32-3-2475399.

William and Mary Kostash Award for Film and Video Arts (URDC)
Deadline: November 30

Terms of reference: Awarded every second year for a project which promotes Ukrainian Canadian identity through the medium of film, video or multimedia. Works in progress and/or completed works will be considered. Drama, documentary, experimental, educational and other genres are acceptable. Open to Gran MacEwan Community College students and independent film or video producers. Successful applicants must forward two copies of their completed films or videos to the Ukrainian Resource Development Centre within one year of receiving this award.

Contact: William and Mary Kostash Award for Film and Video Arts, c/o Ukrainian Resource and Development Centre (URDC), Grant MacEwan Community College, Box 1796, Edmonton AB, T5J 2P2, Tel: (780) 497-4374, Fax: (780) 497-4377.
Web: www.macaewan.ca

Vancouver Foundation - Advanced Arts Study Awards
Deadline: May 31

Terms of reference: The Vancouver Foundation initiated the Advanced Arts Study Awards to help develop talent from BC. Awards will range from $1,000 to $5,000.

Detailed Terms of the Awards (all conditions must apply):
• for a program of advanced study in music, dance or theatre,
• at a recognized institution or with an established professional within or outside of British Columbia,
• student has shown talent and demonstrated a high level of achievement,
• financial assistance is required to enable the student to take up the study opportunity,
• student is a BC resident and a Canadian citizen or landed immigrant,
• student has not received more than one previous award from this program.

Contact: Vancouver Foundation Advanced Arts Study Awards, Mary Olson, Administrator, Vancouver Academy of Music, 1270 Chestnut Street, Vancouver BC, V6J 4R9, Tel: (604) 734-2301, Fax: (604) 731-1920.
Web: www.vancouverfoundation.bc.ca

External Awards for Business Administration Students
British Columbia Export Award - International Business Studies
Deadline: October 3

Terms of reference: Recognizes a student who has shown leadership and excelled in international studies while contributing to British Columbia's export community. The recipient will have an excellent academic standing and have shown initiative in seeking opportunities and putting into action what they have learned in their studies. This may include, but not be limited to research projects, work terms with export oriented companies or development of concepts and ideas that have benefitted BC's exporting community. EDC will present the winner with a $3,000 scholarship for continuing his/her studies.

Contact: Financial Assistance, Simon Fraser University

HBK-Savings Bank Prize
Deadline: June 30

Terms of reference: HBK Savings Bank awards a prize in order to encourage the scientific study on workers’ financial participation and democracy in enterprises. This study deals with economic (ownership) and/or industrial (participation) democracy in enterprises. Candidates have to hold a university degree. A typewritten or printed copy of their work as well as a curriculum vitae mentioning their studies, degrees, professional activities and publications have to be sent to HBK Savings Bank.
The study has to be written in one of the following languages: English, French, German or Dutch.

Contact: HBK-Banque d’Epargne, Lange Lozanstraat 250, B-2018 Antwerpen, Belgium, Tel: 32-3-2475501, Fax: 32-3-2475399.

External Awards for Education Students
The Prime Minister’s Awards for Teaching Excellence
Deadline: unknown
Terms of reference: The Prime Minister’s Awards honor elementary and secondary school teachers across Canada who have best prepared students for the challenges of a changing society and knowledge-based economy. The awards, offered at the Certificate of Excellence and Certificate of Achievement levels, carry a prize of $5000 and $1000, respectively, given to recipients’ schools to be spent under their direction. Nominees must be practising classroom teachers with a minimum of three years experience. Nominators can be anyone with direct knowledge of the educator’s contribution, including principals, parents, students and colleagues.
Contact: Prime Minister’s Awards for Teaching Excellence, Tel: 1-800-575-9200.
Web: www.schoolnet.ca
Email: pmawards@ic.gc.ca

External Awards for Science Students
Cable Telecommunications Research Fellowship Program
Deadline: March 28
Terms of reference: The Cable Telecommunications Research Institute has established graduate fellowships to encourage students at the master or PhD level to tackle topics in the engineering of communications systems for video, voice and data signals or for computer applications to cable TV requirements. Candidates must be Canadian citizens or permanent residents and enrolled or planning to enrol in a Canadian university. Candidates must intend to use the fellowship to assist them in completing a graduate degree which includes a thesis on a topic in the engineering of broadband communications systems or computer science. (In this context, a broadband system can be analogue or digital, or a combination, but must be capable of transporting upwards of 10 video channels.)
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucc.ca
Email: awards@aucc.ca

Canadian Association of Geographer’s Undergraduate Award
Deadline: spring
Terms of reference: The Canadian Association of Geographers will award in spring term, a prize to the outstanding student in geography.
Contact: No application is necessary.
Web: www.caag.ca

Caribou Research Award - Canadian Northern Studies Trust
Deadline: January 31
Terms of reference: The Beverly and Qamanijuaq Caribou Management Scholarship Fund provides awards of up to $2,000 to full-time students enrolled in a recognized Canadian community college or university pursuing studies that will contribute to the understanding of the Barren Ground Caribou and their habitat. Preference will be given to individuals who normally reside in one of the communities on the range of the Beverly and Qamanijuaq Barren Ground Caribou.
Contact: Association of Canadian Universities for Northern Studies (ACUNS), 17 York Street, Suite 405, Ottawa ON, K1N 9J6, Tel: (613) 562-0515, Fax: (613) 562-0533.
Web: www.acuns.ca
Email: awards@acuns.ca

CIPS Computing Co-op Award
Deadline: unknown
Terms of reference: The Vancouver section of the Canadian Information Processing Society provides an award value of $1,500 to a third or fourth year MSSC student who has a major or minor in mathematics or computing science. A scholarship of $250 is available to a runner-up student. Applicants must have at least a 3.00 CGPA and have completed at least two co-op terms.
Contact: The applicable department for application procedures.
Web: www.cips.ca

NSERC Undergraduate Student Research Awards
Deadline: unknown
Terms of reference: The awards are meant to stimulate interest in research in the natural sciences and engineering. They are also meant to encourage students to undertake graduate studies and pursue a research career in these fields.
Contact: Natural Sciences and Engineering Research, Council of Canada, 350 Albert Street, Ottawa ON, K1A 1H5, Tel: (613) 947-0428; Fax: (613) 996-2585.
Web: www.nserc.ca
Email: school@nserc.ca

Science Council of BC - Central Interior Second Year Science Award
Deadline: August 30
Terms of reference: $1,000 to students who graduated from a high school in the central interior region who are proceeding to a second year of studies at a Canadian university, college or institute in the field of science and/or technology. Based on high scholastic achievement (80% minimum) plus personal qualities and activities. Must provide two letters of reference, one from a science teacher, and include high school transcript and first year transcript attached to application.
Contact: K. Steedman, Science Council of BC Central Interior, Box 3019, Kamloops BC, V2C 5Y2 (UC), Campus, Tel: (250) 371-5751, Fax: (250) 828-5492, Email: ksteedman@cariboo.bc.ca

External Loans
Canadian Forces Personnel Assistance Fund (CFCFA) – Education Assistance Loan
Deadline: June 30
Terms of reference: The Canadian Forces Personnel Assistance Fund offers an Education Assistance Loan Program to assist serving and former members and their dependants with costs of post secondary education. To be eligible for a low interest loan of $1,200, $1,500, then in $500 increments up to a maximum of $4,000 per student, per year, the serving or former member must have served in the Canadian Army, after 1 October 1946, or in the Canadian Forces, after 31 January 1968, and have a minimum of one year Regular Force military service. The loans are repayable over a twelve to twenty four month period. Applications will be accepted throughout the year until the funds allotted for the EALP are exhausted.
Contact: Canadian Forces Base Financial Counsellors, district offices of Veterans Affairs Canada, and the Provincial Command offices of the Royal Canadian Legion, CFCFA, 234 Laurier Avenue West, Ottawa ON, K1P 6K6, Tel: (613) 760-3447, 1-888-753-9828, Fax: (613) 233-5907.
Web: www.cfsa.ca

Immigrant Loan Program - MOSAIC Employment Programs
Terms of reference: The Immigrant Loan Program provides internationally trained skilled professionals access to flexible loans that will provide the necessary funds to upgrade their skills and education, and to work towards their career goals.
Contact: Immigrant Loan Program, MOSAIC Employment Programs, 1522 Commercial Drive, Vancouver BC, V5L3Y2, Tel: (604) 254-0244 ext. 243.
Email: loanprogram@mosaicbc.com

PEO Educational Loan Fund
Terms of reference: Loans are available to women students in second to fourth year of a university course, and may be requested at any time. The maximum amount of a loan to any student is $2,000. Fourth year or graduate students may be granted loans and draw the maximum loan of $2,000 for two or more years of study, but may draw only $1,000 of the loan in one academic year. Students must complete satisfactorily one term’s work before making application. Interest at a 6% rate is to be paid annually, and the student is expected to begin payment of the principal as soon as she is out of university and employed.
Contact: International Student Advisor, PEO International Peace Scholarship Fund, PEO Executive Office, 3700 Grand Avenue, Des Moines, Iowa, USA, 50312-3820, Tel: (515) 255-3153, Fax: (515) 255-3820.
Web: www.peointernational.org

Royal Canadian Naval Benevolent Fund
Terms of reference: This fund recognizes the need of financial assistance for educational purposes of former members of the Naval Forces of Canada and Canadian Merchant Navy Veterans. This program is not only for university but for vocational and other special training as well. Financial assistance for dependants is limited to cover tuition, student fees, books and supplies.
Contact: Royal Canadian Naval Benevolent Fund, PO Box 505 Station “B”, Ottawa ON, K1P 5P6, Tel: (613) 996-5087, Fax: (613) 236-8830, Toll Free: 1-888-557-8777.
Web: http://www.noac.ottawa.on.ca/ rcnbf/rcnbfmain.htm
Email: rcnbf@sympatico.ca

Government Administered Programs

Canadian Armed Forces Subsidization Plans
Admission Requirements
An applicant must be a Canadian citizen; be physically fit for enrolment in the Canadian Forces; and be at least 16 years of age on the first day of January of the year the student commences first year studies at university.
How to Apply
Individuals interested in obtaining more information on, or wishing to make application for, any of these plans are requested to contact: Commanding Officer, Canadian Forces Recruiting Centre, 757 West Hastings Street, Vancouver, BC, V6C 1A1.

Government Loans
A loan is a sum of money borrowed by a student who proves financial need on a promise to repay at some specified time.
Canada Student Loan/BC Student Loan

The purpose of the Canada Student Loan/BC Student Loan Program is to assist students whose resources are insufficient to provide the cost of full time studies at the post-secondary level of education. Therefore, funds under the program are granted on a need basis where the financial resources available to students from parents, summer or other employment, part time work, or other sources, are insufficient to meet their estimated educational costs. Normally, the funds provided under this program will be disbursed through a combination of the Canada Student Loan and BC Student Loan. For detailed information see the Student Aid website at www.studentaidbc.ca.

Some students with dependent children may qualify for Canada Study Grant funding. A detailed booklet describing the program in full is available at Financial Aid and Awards or www.studentaidbc.ca.

Eligibility

Applicants must be Canadian citizens or permanent residents (landed immigrants) to be eligible. Assistance will be provided to eligible registered full time undergraduate students taking a minimum of 60% or nine regular credit hours (40% or six for students with permanent disabilities) of a full program of study leading to a certificate, diploma or undergraduate degree, or registered full time (part time for students with permanent disabilities) graduate students. The amount of assistance awarded will be based on assessed need as determined by the provincial authority. See www.studentaidbc.ca for details.

How to Apply

For details on how to apply for a student loan and to receive funding for whom you are eligible, please see www.studentaidbc.ca

Students are advised to keep in constant touch with the bank, or service providers from which they secure their loans. To maintain interest-free loan status and stay eligible for future funding, students should be aware of their responsibilities as described in the Maintain Your Loan section of the www.StudentAidBC.ca website.

For appeals, reassessments or other concerns, please contact Financial Aid and Awards.

Exceptions

Although the majority of programs at Simon Fraser University are eligible for government student loans, some programs do not meet StudentAidBC eligibility criteria (e.g., Executive MBA, MED Off-campus). Please contact Financial Aid and Awards if you do not see your program listed on the www.StudentAidBC.ca on-line program information.

Canada Access Grant – Students from Low Income Families

The Canada Access Grant – Students from Low Income Families is a non-repayable grant for first-time, first-year students entering Post-Secondary Education. It is designed to provide an incentive to students from low-income families to participate in Post-Secondary Education by reducing financial barriers and by offsetting debt (the grant replaces federal student loan with grant).

Loan Reduction

The BC Loan Reduction Program is being delivered in cooperation with the Canada Millennium Scholarship Foundation’s (CMSF) Bursary Program. The CMS Foundation has determined that CMS bursaries and BC grants will be distributed as Loan Reduction Grants to eligible students effective the 2004/2005 program year. The Loan Reduction Grants will be paid at the end of the school year. For further eligibility criteria and information, please see www.StudentAidBC.ca

Government Part-time Grants/Loans

If you are a part time student with demonstrated financial need, you may qualify for a federal study grant of up to $1,200 (Canada Study Grant for High Need Part-Time Students). Grants are targeted to students with dependants and possibly other students with special circumstances who are not able to take full time studies.

Federal student loans up to $4,000 are also available to part time students with financial need. These loans supplement other financial resources such as earnings, scholarships and bursaries.

Part time students who are Canadian citizens or landed immigrants and who are in default of previous federal student loans or grants may apply for both the grant and loan programs.

Applications and information are available from www.StudentAidBC.ca. The deadline for applications is nine weeks before the end of each term.

Grants for Students with Permanent Disabilities

Federal grant programs are available to students with permanent disabilities. The Canada Study Grant for the Accommodation of Students with Permanent Disabilities is designed to offset exceptional education-related costs incurred for services and equipment, such as note-takers, interpreters, and technical aids. Up to $8,000 per program year is available. Check with the Centre for Students with Disabilities in MBC 1250, or call 778.782.3112.

The Canada Access Grant – Students with a Permanent Disability (CAG-PD) is intended to provide up to $2,000 in grant to students with a documented permanent disability. The CAG-PD is intended to assist in covering the costs of accommodation, tuition, books, and other education-related expenses, for up to $2,000 per year.

For eligible students, the $2,000 will be applied before any other funding to reduce the assessed need for full-time students. For part-time students, the grant will be awarded before part-time loans. Contact Financial Aid and Awards in MBC 3200 or call 778.782.4356 for further information.

Grants for Female Doctoral Students

A federal grant program is available to female doctoral students in specific doctoral programs. Please call 778.782.4356 for further information, or see www.StudentAidBC.ca

The Loan Remission Program

If you have a BC Student Loan negotiated prior to August 1, 2000 (Guaranteed or Risk Sharing), the Loan Remission Program may assist in the reduction of your BC Student Loan debt.

If you have a BC Student Loan negotiated after August 1, 2000 (Direct Lend), this loan may be included when calculating your total debt, but will not be eligible for loan remission.

You will not be eligible for consideration under the Loan Remission Program if you have Direct Lend BC Student Loans. For further information and eligibility on the Loan Remission Program, contact: Loan Remission and Management Unit, StudentAidBC, Ministry of Advanced Education or visit the StudentAidBC website at www.StudentAidBC.ca (debt management tools).

Study in BC for Students from Other Countries

United States Students

Citizens (or eligible non-citizens) of the United States attending the university may apply for funding through the US Department of Education Student Financial Assistance Program. A Free Application for Federal Student Aid (FAFSA) must be completed by the student and submitted to the Federal Student Aid Programs. SFU’s school code is 008444. A Student Aid Report (SAR) is then issued to the student. SFU does not receive the SAR electronically because we are a foreign school. You will need to contact FAFSA to request an original eight page SAR.

For appeals, reassessments or other concerns, please contact Student Financial Aid and Awards.

For more information regarding financial aid from the US Department of Education, call: 1.800.4.FED.AID (1.800.433.3243), or http://studentaid.ed.gov

International Students

Students who are not Canadian citizens or Permanent Residents, and who will require financial assistance to attend Simon Fraser University must arrange such assistance in their country of origin before arrival in Canada.

Simon Fraser University permits non-Canadian students to compete for scholarships once they have enrolled at the University on the basis of course work undertaken at Simon Fraser University. Bursaries are awarded on the basis of financial need, but only as supplemental funding, not as core funding needed to meet immigration requirements. Students are expected to exhaust all other sources of funding including government aid from their home country before being eligible for bursaries. See the bursary section for details.

It must be stressed that non-Canadian students should not predicate their tuition and living expense estimates upon these sources. Non-Canadian students are normally not permitted to work in Canada. Such students are expected and required by federal law to have sufficient funds guaranteed for their education prior to arrival in Canada.
For More Information

For further information on programs offered by Financial Aid and Awards (Student Services) see the website at students.sfu.ca/financialaid.

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Faculty of Applied Sciences

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Associate Deans
W.S. Parkhouse BPE (Alta), MPE, PhD (Br Col)
J.D. Jones BSc (Sus), PhD (Reading), PEng

Director, Diversity and Recruitment
H. Matsuji MSc (LSE)

Advisors
Ms. M. Black MA (Royal Roads), 778.782.3254 Tel
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The Faculty of Applied Sciences offers programs in communication, computing science, engineering science, geographic information science, Interactive arts and technology, kinesiology, and resource and environmental management. Bringing together the University’s educational and research activities in the applied sciences, the faculty is concerned with major areas of applied science and technology, and human and social aspects of the application of science.

Undergraduate Degrees Offered
Bachelor of Applied Science (Honors)
Bachelor of Applied Science
Bachelor of Arts (Honors)
Bachelor of Arts
Bachelor of General Studies (Applied Sciences)
Bachelor of Science (Honors)
Bachelor of Science (Information Technology, Tech BC)
Bachelor of Science (Interactive Arts, Tech BC)
Bachelor of Science
Bachelor of Science (Kinesiology) (Honors)
Bachelor of Science (Kinesiology)

Diplomas and Certificates Offered
Certificate in Applied Human Nutrition
Certificate in Computing Studies
Certificate in Health and Fitness Studies
Post Baccalaureate Diploma in Communication
Post Baccalaureate Diploma in Computing Science
Post Baccalaureate Diploma in Kinesiology

Residency Requirements
The University may award substantial transfer credit for course work completed elsewhere. These transfer credit hours are based on the amount of work needed to complete a Simon Fraser University credential, subject to minimum residency requirements for work completed at Simon Fraser University. In addition to University-wide residency requirements, the Faculty of Applied Sciences also defines program-based residency requirements for each of its programs.

Overall, the residency requirements define three conditions that apply to every program offered through the Faculty of Applied Sciences.

• At least half of the program’s total credit hours must be earned through Simon Fraser University study.
• At least two thirds of the program’s total upper division credit hours must be earned through Simon Fraser University study.
• At least two thirds of the upper division credit hours in the courses of a school offering (or jointly offering) a program must be earned through that school at Simon Fraser University.

These conditions apply to all undergraduate degree programs, post baccalaureate and certificate programs offered through the Faculty of Applied Sciences. The conditions also apply to the Faculty’s major, honors, minor, extended minor and specialist programs that form part of an overall degree program, whether the program is offered by the Faculty of Applied Sciences or by any other faculty.

School of Communication

K9671 Shrum Science Centre, 778.782.3687 Tel, 778.782.4024 Fax, www.sfu.ca/communication

Director
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A.L. Feenberg, BA (Johns H), MA, PhD (Calif), Canada Research Chair
R.S. Gruneau BA (Gluteh), MA (Calg), PhD (Mass)
R.A. Hackett BA (S Fraser), MA, PhD (Qu)
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Adjunct Professors
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N. Duxbury BA (St Mary’s, Can), MPub, PhD (S Fraser)
J.A.D. Holbrook BSc (Dal), BSc (Ott), MSc (WOn)
M.S. Lipsett BSc (Alta), SM (MIT), PhD (Lond)
D. Stirling BSc (Guepl), MA (G Washington), PhD (Sask)

Senior Lecturer
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*joint appointment with contemporary arts
Faculty members are also available for consultations.

Faculty and Areas of Research

The study of communication has recently emerged as an identified academic discipline. A number of the traditional disciplines in social sciences, humanities, and natural sciences employ communication approaches in various areas. Communication perspectives are also becoming prominent in the professions, notably in law, medicine, counselling, business, labour, education, trade, diplomacy, advertising, broadcasting, etc. As a social science, communication is distinctively trans-disciplinary.

The school has drawn on a number of perspectives, but is most readily distinguished by the fact that it treats communication as a humanistic social science, and is concerned with the contexts within which diverse information is created, coded, communicated, and controlled. This approach provides wide opportunities to explore both communication theory and communication practice, and the relationship between the two. It encourages the concrete application of theory and research to modern society, its historical origins, its dominant values, its institutions and policies, its present structure, and its current problems and its potential for change.

See “School of Communication” on page 270 for faculty’s areas of research.

Program of Studies

The school offers a specialized program leading to a bachelor of arts major or honors degree. It also offers a minor and a variety of courses in other programs.

Employment opportunities for program graduates may be found in a number of different fields, including:

• a variety of communication-related organizations, in the broadcasting, cable TV, print, and telephone/telecommunications industries
• government agencies involved in communication, such as federal or provincial departments of communications, or regulatory agencies such as the CRTC, or other government agencies with a communication function, such as Consumer and Corporate Affairs, External Affairs, etc.
• public and private agencies involved in the examination and formation of public policy relating to communication technology, development, information flows, etc., at local, regional, national, and international levels
• large organizations (hospitals, school systems, corporations, etc.) as communication manager or specialist, doing liaison work with management and employees, communication; trouble-shooting, public relations, etc.
• specialized study of the acoustic aspects of communication and the sonic environment in such areas as acoustic documentation, sound pollution

An undergraduate degree in communication is also an appropriate preparation for graduate work, not only in communication, but also in other disciplines.

The school is interdisciplinary and international in its approach. It offers study in three broad and interrelated areas of concentration. Courses in each area are listed below, but students are encouraged to take courses from more than one area.

Areas of Concentration

Media and Culture

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Entry Requirements

Admission to the school is highly competitive. Program entry is possible via direct admission from high school, via college or university transfer, or via internal transfer if admitted to another Simon Fraser University department or program.

At time of printing, entry to the school is dependent upon a secondary school CGPA of 75% or better; college or university transfer CGPA of 3.00 (B; 75%); or, internal transfer (Simon Fraser University) CGPA of 2.50 or better, upon completion of the lower division requirements below.

Continuation Requirement

Once approved for a major in communication, a student will be required to maintain a minimum CGPA of 2.25 to remain in good standing in the program (that is, to retain eligibility to continue in the program).

Lower Division Requirements

Students must complete the following core courses.

- CMNS 110-3 Introduction to Communication Studies
- CMNS 130-3 Explorations in Mass Communication

Students must complete at least six (6) CMNS 200 division courses, including at least two of the following research methods courses. (Note that research methods courses are prerequisites to many upper division CMNS courses)

- CMNS 260-3 Empirical Communication Research Methods
- CMNS 261-3 Documentary Research in Communication
- CMNS 262-3 Design and Method in Qualitative Communication Research

Students must also complete at least one course from the choices below for each concentration.

Media and Culture

CMNS 220, 221, 223 or 235.

Technology and Society

CMNS 210 or 253

Political Economy and Policy

CMNS 230 or 240

The remaining 200 division CMNS course(s) can be chosen from any area of concentration. A grade of C- or better is mandatory in each of the required lower division CMNS courses.

Upper Division Requirements

Seven upper division (normally four credit) courses in communication must be completed. At least two of these shall be 400 division courses. Directed study and field placement courses may not be used to meet this requirement.

Normally, upper division courses may not be taken unless lower division course work has been completed, and normally, 75 credit hours must be taken prior to enrolment in 400 division courses.

External Requirements

In addition to CMNS courses, at least 60 credit hours must be chosen from disciplines other than communication including the following additional course work:

- a minimum of 12 credit hours chosen from Asia-Canada, contemporary arts, English, First Nations, French, general studies, history, humanities, Latin American development studies, linguistics, philosophy, Spanish or other languages,
- a minimum of six credit hours chosen from biochemistry, biological sciences, chemistry, computing science, earth sciences, engineering science, environmental sciences, health sciences, interactive arts and technology, kinesiology, management and systems science, mathematics, molecular biology and biochemistry, physics, resource and environmental management, science, statistics; at least three credit hours of which must be from the Faculty of Applied Sciences (CMPT, ENSC, IAT, KIN, REM),
- at least three credit hours of upper division course work (plus lower division prerequisites, if any) chosen from archaeology, business administration, BUEC, Canadian studies, sustainable community development, criminology, economics, education, geography, gerontology, political science, psychology, sociology and anthropology, women's studies.

A minimum total of 45 upper division credit hours is required for the degree. This includes the required upper division CMNS courses, any additional upper division CMNS courses taken, and any upper division courses taken to fulfill the required 60 credit hours outside CMNS.

Honors Program

Entry Requirements

Communication majors wishing to apply to the honors program should obtain the appropriate application form from the general office. The deadlines for application submission are March 15, July 15 and November 15 each year.

The main difference between the regular communication program and the honors program is that honors students complete an honors project (described below). The application form requires the student to describe the proposed honors project and obtain approval signatures: a communication faculty member who agrees to supervise the execution of the project, one other faculty member who agrees to be on the student’s supervisory committee, and the honors co-ordinator.

The school reserves the right to limit the number of honors students if faculty resources are not available for supervision. In such cases, priority for honors program enrollment will be given to the students with a higher CGPA.

Students who have difficulty finding an honors supervisor should contact the school’s honors co-ordinator.

Other admission requirements are as follows:

- completion of 75 credit hours of course work including the lower division requirements of the CMNS major,
- completion of at least one of CMNS 362 or 363,
- a minimum CGPA of 3.0 on all CMNS courses, and
- a minimum CGPA of 3.0 on all Simon Fraser University courses.

Continuation

To remain in this program, students must maintain a minimum CGPA of 3.0 or higher for all courses (including communication courses) taken in each term. Students who do not meet this requirement may be dropped from the program but may apply for readmission at a later date.

Graduation Requirements

To receive honors in communication, students must

- meet the graduation requirements of the communication major program,
- meet the honors graduation requirements of the University and the Faculty of Applied Sciences including at least 60 credit hours at the upper division,
- successfully complete an honors project (CMNS 497 and 498),
- obtain certification by the undergraduate advisor of satisfactory program completion.

Honors Project

Students must have completed at least 90 credit hours of university work with at least 20 credit hours in upper division communication courses before enrolling in the honors project. A plan must be approved by the faculty supervisors and by the honors co-ordinator before work is begun. A pamphlet describing the honors project requirements can be obtained from the school’s general office.
Path B
In addition to the requirements listed above, students choosing this path must also complete one of CMNS 461-3 Field Placement in Dialogue DIAL 461-3 Field Placement in Dialogue and three of CMNS 332-4 Communication and Rhetoric CMNS 347-4 Communication in Conflict and Intervention CMNS 425-4 Applied Communication for Social Issues CMNS 432-4 Public Opinion, Propaganda, and Political Communication CMNS 437-4 Media Democratization: From Critique to Transformation CMNS 447-4 Negotiation and Dialogue as Communication

Prerequisites for the above-mentioned CMNS courses may be waived for Dialogue minor students in consultation with the undergraduate advisor.

Upper Division Requirements
Four of the following courses must be completed, each with a grade of C- or better.

Communication Minor Program

Entry Requirements
Acceptance into the communication minor program is subject to enrolment limitations. Applicants will be accepted who have a minimum CGPA or transfer GPA of 2.50, upon completion of the lower division requirements.

Lower Division Requirements
Students must earn a grade of C- or better in each of the following courses.
CMNS 110-3 Introduction to Communication Studies CMNS 130-3 Explorations in Mass Communication

Continuation Requirement
Once approved for a minor in communication, a student must maintain a minimum CGPA of 2.25 to remain in good standing.

Upper Division Requirements
Four upper division communication courses must be completed (together with lower division prerequisites, if any). Directed study and field placement courses may not be used to meet this requirement.

Dialogue Minor Program

This minor is a concentration in dialogue studies to enable students with interests in many disciplines, including communication, to focus on the conceptual framework, technique and practice of creating, sustaining, and evaluating dialogue. It highlights the relationship of dialogue with public issues. Emphasis is on the relevance of dialogue as an approach to difficult public issues, including situations where conflict resolution or conflict management is evident. Analysis ranges from local to global. The dis-entanglement of persuasive rhetoric, propaganda and reasoned policy communication in controversial public issues is at the centre of the training.

Admission Requirements
Acceptance into this minor program is subject to enrolment limitations. Applicants will be accepted who have a minimum CGPA or transfer CGPA of 3.00, upon completion of 50 credit hours (at Simon Fraser University and/or transfer credits).

Continuation Requirements
Students must maintain a minimum 2.75 CGPA to remain in good standing. Those who do not maintain this requirement may be dropped from the program, but may apply for readmission at a later date.

Upper Division Requirements
Students must complete a total of 19 upper division credit hours, including either Path A or Path B (see below), and one of CMNS 460-4 Seminar in Dialogue and Public Issues DIAL 460-4 Seminar in Dialogue and Public Issues

Path A
In addition to the requirements listed above, students choosing this path must also complete all of DIAL 390-5 Undergraduate Semester: Dialogue DIAL 391-5 Undergraduate Semester: Seminar DIAL 392-5 Undergraduate Semester: Seminar

Communication Extended Minor Program

This extended minor program may be part of a BA degree in the Faculty of Arts and Social Sciences, which includes two extended minors. Consult the Faculty of Arts and Social Sciences section for specific details about this option.

Entry Requirements
Acceptance into the extended minor program is subject to enrolment limitations. Applicants will be accepted who have a minimum CGPA or transfer GPA of 2.50, upon completion of the lower division requirements.

Lower Division Requirements
Students must complete the following core courses:
CMNS 110-3 Introduction to Communication Studies CMNS 130-3 Explorations in Mass Communication

Continuation Requirement
Once approved for an extended minor in communication, a student must maintain a minimum CGPA of 2.25 to remain in good standing.

Upper Division Requirements
Four upper division courses in communication must be completed (together with lower division prerequisites, if any). Directed study and field placement courses may not be used to meet this requirement.

Joint Major in Communication and Business Administration
See “Joint Major in Business Administration and Communication” on page 195 for requirements.

Joint Major in Communication and Canadian Studies
See “Joint Major Programs” on page 136 for requirements.

Joint Major in Communication and Latin American Development Studies
See “Joint Major Programs” on page 170.
Joint Major in Communication and Sociology/Anthropology

See “Joint Major in Sociology or Anthropology and Communication” on page 182 for requirements.

Post Baccalaureate Diploma in Communication

This program is available for students who have already completed a degree.

Requirements

Successful completion of an approved program comprised of 30-32 credit hours of upper division or graduate level courses (normally eight 4-credit courses numbered 300 or above). Courses must be selected in consultation with a program advisor. At least five of the upper division courses (20 credit hours) must be in communication; the remaining 10-12 credit hours could be in related disciplines, such as sociology, Canadian studies, history, English, women’s studies, etc.

Students may also be required to take some background lower division courses in preparation for the advanced courses. For example, a student who has a B in an area not related to communication would be encouraged to take at least CMNS 110 and/or 130 before enrolling in any of the 300 and 400 division courses.

For information about the program’s general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Co-operative Education Program

Co-op education combines work experience with academic studies. The student spends alternate semesters on campus and in paid, study-related jobs. Arrangements for the work experiences are made through the school’s co-op co-ordinators and the University’s Office of Co-operative Education. See “Co-operative Education” on page 237.

School of Computing Science

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high school or direct transfer from another post secondary institution.
Please contact an advisor at www.cs.sfu.ca/undergrad/Advising.

Guaranteed Placement Program
This admission entry program has been created for high school students who are not eligible for our direct admission program (based on their high school grade average), but still have a good grade average.

This program assures students of timely access to the courses needed to enter the computing science major or honors programs under the internal transfer model. Students may continue in the program for up to two years with a 2.40 or better CGPA.

Students who are considering this program are strongly recommended to meet with a school academic advisor within the first two semesters of study. See www.cs.sfu.ca/undergrad/Advising.

Internal Transfer
Simon Fraser University students applying for admission to the School of Computing Science are selected on the basis of an admission Computing Related Grade Point Average. The CRGPA is calculated over seven courses chosen to satisfy the following breadth constraints.

- one writing course: PHIL 100, 120, TECH 101 or any 100 division ENGL course
- two mathematics courses chosen from: MACM 101, 201, MATH 151, 152 and 240
- two computing courses chosen from: CMPT 101, 125, or 126, 150, (or ENSC 150), 201, 225, 250 and 275
- one physical sciences course: BISC 101, 102, CHEM 120, 121, 122, EASC 101, GEOG 111, KIN 142, PHYS 101, 102, 120, 121, 125 or 126
- one social sciences course: ARCH 105, CMNS 110, 130, CNS 160, COGS 100, CRIM 101, ECON 103, 105, GEOG 100, HIST 106, POL 100, PSYC 100, REM 100, SA 101, 150, TECH 114 or WS 101

No course may be included in the average if it is considered a duplicate of any previous course taken at Simon Fraser University or elsewhere. All seven courses must be completed prior to application. Students are encouraged to take additional courses. The admission CRGPA is calculated over the best seven courses that satisfy the constraints. For more information, see www.cs.sfu.ca/undergrad/Advising.

Continuation Requirements
Computing science students must maintain a 2.40 or better CGPA, or they will be placed on probationary standing with the school. Courses available to probationary students may be limited. Each term, these students must consult an advisor prior to enrollment and must achieve either a term GPA of at least 2.40 or an improved CGPA. Reinstatement from probationary standing occurs when the CGPA improves to 2.40 or better and is maintained.

Students must obtain permission from the department if they wish to take, for further credit, any course that is a prerequisite for a course the student has already completed with a grade of C- or higher.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information or visit www.cs.sfu.ca/undergrad/Advising.

Second Degree Program
This is a direct admission program and holders of a recognized Bachelor's degree in another discipline may follow this program to earn a second degree. Applicants should indicate their program interest by selecting the Computing Science, Faculty of Applied Sciences BSc major as their first choice. Applicants are selected primarily on upper division (third and fourth year) performance in the prior Bachelor's degree and subsequent professional experience.

The program can be completed by the well-prepared student in one year (three semesters) of full-time study. The ideal preparation is a background in mathematics with programming experience comparable to the first two years of the computing science major program and a prior degree in which English was the language of instruction. Students without this background may require additional time to complete lower division prerequisites prior to the commencement of upper division courses.

In accord with University regulations, the second degree program consists of the upper division requirements of the full computing science degree, including WQB requirements as assessed by the school. For a general BSc degree majoring in computing science, 45 upper division credit hours must be completed including the 39 upper division credit hours as specified for the major. For more information visit www.cs.sfu.ca/undergrad/Advising.

Major and Honors Programs
These programs are organized so that students may take advantage of a number of options. Some are preparation for employment in computer-related positions in government, business, or industry, and for computing science graduate studies or a related area.

The completion of a computing science undergraduate degree is appropriate preparation for many interdisciplinary areas.

Lower Division Requirements
Students who plan a major or honors in computing science must complete the courses listed below. It is suggested that students complete a recommended schedule of courses within the first two years.*

Courses
one of *CMPT 125-3 Introduction to Computing Science and Programming
CMPT 126-3 Introduction to Computing Science and Programming
and all of
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
CMPT 250-3 Introduction to Computer Architecture
CMPT 275-4 Software Engineering I
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 151-3 Calculus I***
MATH 152-3 Calculus II***
MATH 240-3 Elementary Linear Algebra
one writing course
four external breadth courses (see www.cs.sfu.ca/undergrad/Advising/ExternalBreadthList.html)
and one of
STAT 270-3 Introduction to Probability and Statistics I
BUEC 232-4 Data and Decisions I (with permission of an advisor)
49-53 credit hours
*see www.cs.sfu.ca/undergrad/Advising/programs_majors.html for recommended schedule
**to aid your choice, prior to enrollment, complete the self-evaluation test at www.cs.sfu.ca/undergrad/Advising/120-126/

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Second Degree Program
**MATH 154/155 or MATH 157/158 with a grade of at least B+ may be substituted with school permission

Writing Requirement
Students must complete one of
PHIL 100-3 Knowledge and Reality
PHIL 120-3 Introduction to Moral Philosophy
TECH 101-3 Fundamentals of Teamwork and Communication
or any 100 division ENGL course

Diversity Requirements
Diversity requirements are met by selecting one course from the physical sciences list, one from the social sciences list, and two from the liberal arts course list.

Physical Sciences
Students choose one of
BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 120-3 General Chemistry I
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EASC 101-3 Physical Geology
GEOG 111-3 Physical Geography
KIN 142-3 Introduction to Kinesiology
PHYS 101-3 General Physics I
PHYS 102-3 General Physics II
PHYS 120-3 Modern Physics and Mechanics
PHYS 123-3 Optics, Electricity and Magnetism
PHYS 125-3 Mechanics and Special Relativity
PHYS 126-3 Electricity, Magnetism and Light

Social Sciences
Students choose one of
ARCH 105-3 The Evolution of Technology
CMNS 110-3 Introduction to Communication Studies
CMNS 130-3 Explorations in Mass Communication
CNS 160-3 The Social Background of Canada
COGS 100-3 Introduction to Cognitive Science
CRIM 101-3 Introduction to Criminology
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
GEOG 100-3 Human Geography
HIST 106-3 Western Civilization from the Reformation Era to the 20th Century
POL 100-3 Introduction to Politics and Government
PSYC 100-3 Introduction to Psychology I
REM 100-3 Global Change
SA 101-4 Introduction to Anthropology (A)
SA 150-4 Introduction to Sociology (S)
TECH 114-3 History and Theory of Technology and Culture
WS 101-3 Introduction to Women’s Issues in Canada

Upper Division Requirements
The primary upper division requirements for a major or honors are structured according to breadth, depth and credential requirements listed below.

Table I – Computing Science Concentrations

<table>
<thead>
<tr>
<th>Artificial Intelligence</th>
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<tbody>
<tr>
<td>CMPT 310-3 Artificial Intelligence Survey</td>
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<tr>
<td>CMPT 411-3 Knowledge Representation</td>
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<tr>
<td>CMPT 412-3 Computational Vision</td>
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<tr>
<td>CMPT 413-3 Computational Linguistics</td>
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<tr>
<td>CMPT 414-3 Model-Based Computer Vision</td>
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<tr>
<td>CMPT 417-3 Intelligent Systems</td>
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<tr>
<td>CMPT 418-3 Computational Cognitive Architecture</td>
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<tr>
<td>CMPT 419-3 Special Topics in Artificial Intelligence</td>
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<table>
<thead>
<tr>
<th>Computer Graphics and Multimedia</th>
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<tbody>
<tr>
<td>CMPT 361-3 Introduction to Computer Graphics</td>
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</tbody>
</table>
Twelve credit hours of additional CMPT courses numbered CMPT 400 or above must be completed (excluding CMPT 415, 416 and 498, which may be included by special permission).

BSc Credential
For a BSc degree with a major in computing science, the following additional requirements must be met:
• two additional courses chosen from tables I, II or III must be completed.
• MATH 343 and MACM 316 and CMPT 320 or CMNS 353
Other courses may be approved on submission of a detailed course outline to the school.

BA Credential
For a BA degree with a major in computing science within the Faculty of Applied Sciences, the following additional requirements must be met:
• one additional CMPT upper division course chosen from table I or table II must be completed bringing the total upper division credit hours in CMPT courses to a minimum of 30 credit hours.
• a concentration of 15 credit hours in a Faculty of Arts and Social Sciences discipline (department) including at least six credit hours of upper division credit.

Graduation Requirements
For all major programs in computing science, the upper division CMPT GPA of 2.00 must be maintained.
For a major in computing science, the following must be met:
• 120 credit hours must be completed including, an overall minimum of 45 credit hours of upper division credit.
• a minimum of at least 30 credit hours of upper division CMPT courses must be counted towards the major and cannot at the same time be counted towards the credit hour requirements of any other program.

See “Major – Minor Program” on page 6 for regulations governing university graduation requirements, or see www.students.sfu.ca/calendar to find “General Information” from the Table of Contents.

Upper Division Requirements for Honors
For a BA or BSc degree with honors in computing science, students must fulfill the following requirements for a BA or BSc major in computing science, with the following modifications and additions.

Credit Hour Requirement
Additional computing science courses must be completed to bring the total upper division credit hours in CMPT/MACM to at least 50 within the minimum of 60 upper division hours and an overall total of 132 hours are required for the degree, together with a graduation grade point average of at least 3.00.

Breadth Requirement
One course each in the six areas of table I is required. These courses must include CMPT 300, 307 and 354.

Depth Requirement
Six additional courses from table I are required. These courses must include CMPT 405 and at least one other course in the theoretical computing science concentration. At least four of the courses must be numbered 400 or above.

In addition, six credit hours of research courses are required including both CMPT 415-3 Special Research Projects CMPT 416-3 Special Research Projects or CMPT 498-6 Honors Research Project

Specialist Programs
Students must consult an advisor before commencing a specialist program, preferably early in their second year. See www.cs.sfu.ca/undergrad/Advising/ Specialist Program in Multimedia Computing
Lower Division Requirements
Students must complete all lower division requirements for the computing science major program plus
FPA 111-3 Issues in the Fine and Performing Arts plus at least two of CMNS 259-3 Acoustic Dimensions of Communication I
FPA 147-3 Introduction to Electroacoustic Music
FPA 247-3 Electroacoustic Music I
FPA 289-3 Special Topics in the Fine and Performing Arts
FPA 290-3 Video Production I

Upper Division Requirements
Students must complete at least 39 credit hours of computing science upper division courses, which should include CMPT courses in the following required and elective courses.

Students must complete all of CMPT 300-3 Operating Systems I CMPT 307-3 Data Structures and Algorithms CMPT 320-3 Social Implications of a Computerized Society CMPT 364-3 Introduction to Computer Graphics CMPT 365-3 Multimedia Systems MATH 316-3 Numerical Analysis I

At least six of the following are required, three of which must be 400 division, three must be designated CMPT and two must be non-CMPT courses.

CMNS 358-4 Sound Tape Recording; Theory and Uses
CMNS 359-4 Acoustic Dimensions of Communication II
CMPT 310-3 Artificial Intelligence Survey
CMPT 354-3 Database Systems and Structures
CMPT 368-3 Introduction to Computer Theory and Synthesis
CMPT 371-3 Data Communications and Networking
CMPT 412-3 Computational Vision
CMPT 414-3 Model-Based Computer Vision
CMPT 461-3 Advanced Computer Graphics
CMPT 466-3 Animation
CMPT 469-3 Special Topics in Computer Graphics

FPA 311-5 The Arts in Context: Selected Topics
FPA 353-3 Playmaking IV
FPA 390-3 Video Production II

Relevant FPA and CMNS lower and upper division special topics courses may be applied to the above requirement with the approval of the director of undergraduate studies in the School of Computing Science. Some FPA courses listed above require prerequisites that are not included here.

Specialist Program in Software Engineering
The completion of a bachelor of science degree in computing science with the completion of a specialist program in software engineering is not a professional
engineering degree as it is not certified by professional engineering societies. It is instead an area of study recognized by computing science.

**Lower Division Requirements**
These requirements are identical to those of the major and honors program listed above.

**Upper Division Requirements**

**Required Courses**
- Students must complete all eight of CMPT 300-3 Operating Systems I
- CMPT 307-3 Data Structures and Algorithms
- CMPT 320-3 Social Implications of a Computerized Society
- CMPT 354-3 Database Systems I
- CMPT 363-3 User Interface Design
- CMPT 371-3 Data Communications and Networking
- CMPT 475-3 Software Engineering II
- MACM 316-3 Numerical Analysis I

**Elective Courses**
Students must complete five or more courses chosen from the following list, at least three of which must be at the 400 division.
- CMPT 301-3 Information Systems Management
- CMPT 370-3 Information System Design
- CMPT 379-3 Principles of Compiler Design
- CMPT 383-3 Comparative Programming Languages
- CMPT 401-3 Operating Systems II
- CMPT 454-3 Database Systems II
- CMPT 459-3 Special Topics In Database Systems
- CMPT 470-3 Web-based Information Systems
- CMPT 471-3 Networking II
- CMPT 477-3 Introduction to Formal Verification
- CMPT 487-3 Software Engineering Tools and Environments
- CMPT 489-3 Special Topics in Programming Languages
- ENSC 351-4 Real Time and Embedded Systems

Additional upper CMPT courses are required to bring the total CMPT credit hours to 45 or more. (ENSC 351 is treated as CMPT credit for this purpose).

**Simon Fraser University – Zhejiang University Dual Degree Program**

A unique program developed by Simon Fraser University and Zhejiang University (China) offers a dual degree, with a major in computing science from two institutions.

**Admission Requirements**
This is a direct admission program. Simon Fraser University applicants indicate, on the Application for Undergraduate Admission to Simon Fraser University, their interest by selecting the ‘China Dual Degree Zhejiang University’ under Program/Plan in Computing Science, Faculty of Applied Sciences. Admission is competitive and enrollment is limited. The program begins each fall term. Applicants must meet the standard requirements for admission to Simon Fraser University and the School of Computing Science. Concurrent to the Simon Fraser University admission application, students must also submit a ‘Statement of Interest’ to the SFU-ZU admissions committee, School of Computing Science. Applicants will be selected based on their Statement of Interest and their academic standing. Program admission inquiries may be sent to cschina@sfu.ca.

**Program Structure**

Simon Fraser University Students
- Students with no previous knowledge of Chinese will complete a five year curriculum with customized intensive Chinese language courses at Simon Fraser University in addition to some foundational courses in the Prep/0th year, plus Chinese immersion in the summer.
- First and Second Year
  - Simon Fraser University students study at Zhejiang University, completing 80 lower division credit hours (including 20 for Chinese language and culture.)
- Third and Fourth Year
  - Students complete 60 credit hours at Simon Fraser University (including a minimum of 45 upper division credit hours).

Zhejiang University Students
- First and Second Year
  - Zhejiang University students study at Zhejiang University, completing 80 lower division credit hours plus 18 credit hours (Chinese moral education and physical education).
- Third and Fourth Year
  - Students complete 60 credit hours at Simon Fraser University (including a minimum of 45 upper division credit hours).

All core courses are scheduled according to the articulation documents shown on the website www.cs.sfu.ca/SFU-ZU. All students in the dual degree program are expected to fulfill the WQB requirements (see “Writing, Quantitative, and Breadth Requirements” on page 7) for their Simon Fraser University degree.

The option for work experience is available to students after the fourth term at Zhejiang University. Upon completion, students receive dual degrees from Simon Fraser University and Zhejiang University.

**Tuition and Program Fee**
All students in this program will pay undergraduate fees (including tuition and other fees) to Simon Fraser University. All students must pay a $700 program fee each year in addition to the other tuition fees. Students are also responsible for travel, accommodation, insurance, textbooks and general living expenses (noting that in China, books, housing meals, transportation and living expenses will be lower than in Canada). Domestic students in this program will pay the basic Simon Fraser University tuition. International students attending the SFU-ZU dual degree program will pay the basic Simon Fraser University tuition in years one and two when studying in Zhejiang University in China. In years zero, three and four, when studying at Simon Fraser University, international students will pay differential tuition fees.

**Dual Degree Credential**
Students will receive two degrees after completing lower division courses at Zhejiang University, and upper division courses at Simon Fraser University, as specified in the articulation documents at www.cs.sfu.ca/SFU-ZU.

All students must complete the following upper division courses at Simon Fraser University.

- CMPT 300-3 Operating Systems I
- CMPT 307-3 Data Structures and Algorithms
- CMPT 320-3 Social Implications of a Computerized Society
- CMPT 354-3 Database Systems I
- CMPT 371-3 Data Communications and Networking
- CMPT 376-3 Technical Writing and Group Dynamics
- MACM 316-3 Numerical Analysis I
- two CMPT courses from two different concentrations selected from Artificial Intelligence, Computer Graphics and Multimedia, or Programming Languages and Software (see Table I Computing Science Concentration) numbered at the 300 division
- four CMPT courses numbered 400 or higher from Table 1 (see “Table I – Computing Science Concentrations” on page 113)

**Co-operative Education and Work Experience**
All students may choose to participate in co-operative education or work placements.

**Minor Program**

**Admission Requirements**
Admission to a minor in computing science is open to all Simon Fraser University students with a major in a discipline other than computing science. Admission is competitive and requires the completion of the lower division courses listed below. The admission GPA is established each term, and will never be less than 2.40.

**Lower Division Requirements**
Students who plan to undertake a minor in computing science should normally obtain credit for the following lower division courses.

1. CMPT 125-3 Introduction to Computing Science and Programming II
2. CMPT 126-3 Introduction to Computing Science and Programming
3. CMPT 150-3 Introduction to Computer Design
4. CMPT 225-3 Data Structures and Programming
5. MACM 101-3 Discrete Mathematics I
6. MATH 151-3 Calculus I**

and one of
- CMPT 250-3 Introduction to Computer Architecture
- CMPT 275-4 Software Engineering I

and one of
- PHIL 100-3 Knowledge and Reality
- PHIL 120-3 Introduction to Moral Philosophy
- TECH 101-3 Fundamentals of Teamwork and Communication II
or any 100 division ENGL course 18-22 credit hours

**Upper Division Requirements**
For a minor, students must complete 15 credit hours of upper division CMPT or MACM courses, including at least nine credit hours of CMPT courses chosen from Table I – Computing Science Concentrations (page 113).

**Graduation Requirements**

A grade point average of 2.00 must be obtained for upper division courses used to fulfill the above requirements. See www.students.sfu.ca/calendar.

**Joint Major in Computing Science and Linguistics**
The School of Computing Science and the Department of Linguistics offer this joint major in the area of computational linguistics. Interested students should contact advisors in both departments for permission to enrol in the program. Student enrollment, appeals and graduation processing are handled by the school.
Lower Division Requirements
Students complete all of
MATH 151-3 Calculus I*
MATH 152-3 Calculus II*
MATH 240-3 Elementary Linear Algebra
and one of
BUEC 222-4 Data and Decisions I
STAT 270-3 Introduction to Probability and Statistics
and one of
COGS 100-3 Introduction to Cognitive Science
or one course chosen from the social sciences electives list in the computing science major program's lower division requirements (see "Social Sciences" on page 113.

*LATH 154/155 or MATH 157/158 with a grade of at least B+ may be substituted with permission of the school

Computing Science Requirements
Students must complete either
CMPT 126-3 Introduction to Computing Science and Programming*
or both of
CMPT 120-3 Introduction to Computing Science and Programming I*
CMPT 125-3 Introduction to Computing Science and Programming II*
and all of
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures
CMPT 275-4 Software Engineering
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
*to aid in your choice, prior to enrollment, complete the self-evaluation test at www.cs.sfu.ca/undergrad/Advising/120-126

Linguistics Requirements
Students complete all of
LING 130-3 Practical Phonetics
LING 220-3 Introduction to Linguistics
LING 221-3 Introduction to Phonology
LING 222-3 Introduction to Syntax

Upper Division Requirements
Computing Science Requirements (27 credit hours)
Students complete all of
CMPT 300-3 Operating Systems
CMPT 307-3 Data Structures and Algorithms
CMPT 320-3 Social Implications of a Computerized Society
CMPT 413-3 Computational Linguistics
In addition, students choose four courses from the following distinct concentration areas: computer graphics and multimedia; information systems; programming languages and software; computing systems (CMPT 379 is recommended); theoretical computer science (CMPT 308 is recommended).

Linguistics Requirements (21 credit hours)
Students must complete both of
LING 321-3 Phonology
LING 322-3 Syntax
and one of
LING 400-3 Formal Linguistics
MACM 300-3 Introduction to Formal Languages and Automata with Applications
Students also complete 12 credit hours chosen from the following
LING 323-3 Morphology
LING 324-3 Semantics
LING 330-3 Phonetics
LING 401-3 Topics in Phonetics
LING 405-3 Topics in Syntax
LING 406-3 Topics in Semantics
LING 480-3 Topics in Linguistics I*
LING 481-3 Topics in Linguistics II*
*when offered with a suitable topic

Other Requirements
Depending on the student’s choice, either a Bachelor of Arts from the Faculty of Arts and Social Sciences (FASS), or a Bachelor of Science from the Faculty of Applied Sciences (FAS) will be awarded. Students must fulfill their chosen faculty’s distinct requirements, such as FASS breadth requirements, or FAS residency requirements. For details about Faculty requirements, see “Bachelor of Arts Degree” on page 130 in the Faculty of Arts and Social Science, and also see “Residency Requirements” on page 109 in the Faculty of Applied Sciences.

Students are encouraged to enrol in the Co-operative Education program.

Joint Major in Computing Science and Molecular Biology and Biochemistry
The School of Computing Science and the Department of Molecular Biology and Biochemistry co-operate in offering this joint major program. See “Department of Molecular Biology and Biochemistry” on page 225 within the Faculty of Science. Student enrollment, appeals and graduation processing are handled by the School of Computing Science in the Faculty of Applied Sciences (www.cs.sfu.ca). Please contact an advisor at www.cs.sfu.ca/undergrad/Advising/

Joint Major in Computing Science and Philosophy
The School of Computing Science and the Department of Philosophy co-operate in offering this joint major program. The administrative home is within the Faculty of Applied Sciences for purposes of student enrollment, appeals and graduation processing. Interested students should contact advisors in both departments.

Lower Division Requirements (50-54 credit hours)
Students must complete all of
MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
and one of
STAT 270-3 Introduction to Probability and Statistics
and one physical science course chosen from the physical sciences electives list for the computing science lower division requirements.

Computing Science Requirements
Students must complete all of
CMPT 120-3 Introduction to Computing Science and Programming*
CMPT 125-3 Introduction to Computing Science and Programming II*
CMPT 300-3 Operating Systems
CMPT 354-3 Database Management Systems
and one of
CMPT 383-3 Comparative Programming Languages
CMPT 384-3 Symbolic Computing
and one 400 division course from the Artificial Intelligence concentration (see “Artificial Intelligence” on page 114)
and one 400 division courses from the theoretical computing science concentration (see “Theoretical Computing Science” on page 114)

Philosophy Requirements
A total of 20 upper division philosophy credit hours are required including
PHIL 341-3 Philosophy of Science
PHIL 344-4 Philosophy of Language I
PHIL 343-3 Philosophy of Mind
and at least one four credit hour course at the 400 division

Other Requirements
For a Bachelor of Arts degree from the Faculty of Arts and Social Sciences, students must fulfill the Faculty of Arts and Social Sciences requirements, such as the breadth requirements (see "Writing, Quantitative, and Breadth Requirements" on page 130).

For a Bachelor of Science degree from the Faculty of Applied Sciences, students must fulfill the Faculty of Applied Sciences requirements, such as the residency requirements (see “Residency Requirements” on page 109).

The University’s writing, quantitative and breadth requirements must also be completed for either degree (see “Writing, Quantitative, and Breadth Requirements” on page 130).

Co-operative Education
Students are encouraged to enrol in this program.

Joint Major in Information Systems Business Administration and Computing Science
In co-operation with the Faculty of Business Administration, the School of Computing Science offers a Joint Major in Information Systems in Business Administration and Computing Science. For course requirements see the Faculty of Business Administration’s listing on page 195.

Upon completion of these requirements, students may choose either a BBA degree (as offered by the
Faculty of Business Administration) or a BSc degree (as offered by the Faculty of Applied Sciences) with the completion of MACM 316 and a course from tables I, II, or III (see “Upper Division Requirements” above), excluding CMPT 301, in addition to those listed in the Business Administration section for the joint major.

Joint Honors in Computing Science and Philosophy

The School of Computing Science and the Department of Philosophy co-operate in offering this joint honors program. The administrative home is within the Faculty of Applied Sciences for purposes of student enrollment, appeals and graduation processing. Interested students should contact advisors in both departments.

University regulations require a total of at least 132 credit hours for an honors degree.

Lower Division Requirements (53-57 credit hours)

In addition to completing the same lower division requirements as stipulated for the joint major in computing science and philosophy (see “Joint Major in Computing Science and Philosophy” on page 116), students must also complete CMPT 250-3 Introduction to Computer Architecture

Upper Division Requirements (61 credit hours)

Computing Science Requirements

In addition to completing the same lower division requirements as stipulated for the joint major in computing science and philosophy (see “Joint Major in Computing Science and Philosophy” on page 116), students must also complete CMPT 405-3 Design and Analysis of Computing Algorithms

Whereas the joint major stipulates that students must complete one 400 division course from the theoretical computing science concentration, joint honors students instead are required to complete any two additional 400 division CMPT course.

Philosophy Requirements

Students must complete a total of 28 upper division credit hours including all of PHIL 341-3 Philosophy of Science
PHIL 344-3 Philosophy of Language I
PHIL 343-3 Philosophy of Mind
PHIL 477-5 Honors Tutorial I
and one of
PHIL 350-3 Ancient Philosophy
PHIL 352-3 Seventeen century Philosophy
PHIL 356-3 Century Philosophy
PHIL 322-3 History of Ethics
PHIL 331-3 Selected Topics
PHIL 332-3 Selected Topics
PHIL 333-3 Selected Topics
PHIL 367-3 Topics in the History of Philosophy
and one of
PHIL 444-4 Philosophy of Language II
PHIL 455-4 contemporary issues in Epistemology and Metaphysics
and one four credit hour course at the 400 division.

Other Requirements

See “Other Requirements” on page 116 within the Joint Major in Computing Science and Philosophy for additional requirements.

Joint Honors in Mathematics and Computing Science

In co-operation with the Department of Mathematics, the School of Computing Science offers a joint honors program. For course requirements see the Department of Mathematics’ listing on page 225.

Cognitive Science Program

In co-operation with the Departments of Linguistics, Philosophy and Psychology, the School of Computing Science contributes to the undergraduate degree program in cognitive science, leading to a BA degree. See page 138 for details about the requirements.

Management and Systems Science Program

In co-operation with the Department of Mathematics, the Department of Economics and the Faculty of Business Administration, the school contributes to this program in management and systems science, leading to a BSc degree. See “Management and Systems Science Program” on page 220 for more details about the requirements.

Certificate in Computing Studies

This program provides both part time and full time students with an opportunity to understand the fundamentals of computers and programming without necessarily specializing in computing science. Admission is governed by Simon Fraser University admission regulations.

Program Requirements

This certificate requires completion of from 25 to 28 credit hours of required course work and electives, as follows.

Required Courses

one of *
CMPT 125-3 Introduction to Computing Science and Programming II
CMPT 126-3 Introduction to Computing Science and Programming
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
CMPT 275-4 Software Engineering I
MACM 101-3 Discrete Mathematics I
*to aid your choice, prior to enrollment, complete the self-evaluation test at www.cs.sfu.ca/undergrad/Advising/120-126/

Elective Courses

A total of nine elective credit hours must be completed and must include two of the following lower division electives
CMPT 110-3 Event-Driven Programming in Visual Basic
CMPT 118-3 Special Topics in Computer and Information Technology
CMPT 165-3 Introduction to Multimedia and the Internet
CMPT 212-3 Object-Oriented Applications Design in C++
plus a three credit CMPT course at the 300 or 400 division.
9 credit hours

Notes

A 2.00 GPA is required on the CMPT courses used for this certificate and ONLY courses taken at Simon Fraser University are used in this calculation.

Post Baccalaureate Diploma in Computing Science

This program is for students who already possess a university degree. It includes studies in computing science at a more advanced level.

Requirements

Students complete an approved program consisting of at least 30 credit hours which include the following or equivalent.
CMPT 300-3 Operating Systems I
CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems and Structures

Students must complete additional upper division computing science courses and/or computing science graduate courses (with instructor’s consent) to bring the total to at least 30 credit hours.

Courses must be selected in consultation with a program advisor to achieve a coherent program of study. The student is responsible for satisfying the prerequisites of program courses. This may entail taking more or all courses listed in the lower division requirements of the major in computing science (depending upon the student’s prior transcript).

Please contact an advisor at www.cs.sfu.ca/undergrad/Advising/Cooperative

Co-operative Education

Co-operative education is a system which combines work experience with academic studies. The student spends alternate semesters on campus and in paid, study related jobs.

Arrangements for the work experiences are made through the school’s co-op co-ordinators and the University’s Office of Co-operative Education. For further details, students should see “Co-operative Education” on page 237.

School of Engineering Science

9851 Applied Science Building, 778.782.4371 Tel, 778.782.4951 Fax, www.ensc.sfu.ca

Director
M. Saff BSEE, MSEE, PhD (Cleveland), PEng

Professors Emeriti
T.W. Calvert BSc(Eng) (Lond), MSEE (Wayne), PhD (Carnegie Tech), PEng
V. Cuperman MSc (TI Bucharest), SB, MS, PhD (Calif), PEng
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W.A. Gruver BSEE, MSEE (Penn), DIC (Imperial Coll, London), PhD (Penn), PEng

Professors
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J.K. Cavers BEng, BSc, PhD (Br Col), PEng, Canada Research Chair
G.H. Chapman BSc, MSc (Qu), PhD (McM), PEng
F.G. Golnaraghi BS, MS (WPI), PhD (Cornell)
K.K. Gupta BTech (IIT Delhi), MEng, PhD (McG), PEng
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P.K.M. Ho BSc, BE (Sask), PhD (Qu), PEng
R.F. Hobson BSc (Br Col), PhD (Wat)
B. Kamiska MSc, PhD (Water)
A.M. Leung BS, MS, PhD (Case W Reserve), PEng
M. Parameswaran BE (Madr), MSc, PhD (Atl), PEng
S. Payandeh BSc, MS (Akron), MASC, PhD (Tor), PEng

Simon Fraser University 2007 • 2008 Calendar
Mechatronic Systems Engineering Program
This program, located at Simon Fraser University Surrey, leads to a BASc degree.

Minor in Computer and Electronics Design
This program is available to all non-engineering science majors at Simon Fraser University who have high academic standing. This program does not lead to an accredited engineering degree.

Admission Requirements
Minimum Admission Requirements
Students must be eligible for University admission and must submit an application as described in the “Admission and Readmission” on page 17 or at www.students.sfu.ca/admission/

Transfer Credit and Residency Requirements
The program begins each fall. However, admitted students may enter in the spring or summer term. Engineering science admission inquiries may be sent to ensc_advis @sfu.ca. More detailed admission information is available at www.ensc.sfu.ca.

External Transfer from Another Post-Secondary Institution
Students transferring from other universities, regional colleges, or technical institutions may apply to begin study in any term and must have an admission average of 2.5.

Internal Transfer from Another Simon Fraser University Program
Simon Fraser University students who wish to transfer to engineering science require a 2.5 CGPA from the Faculty of Science, School of Computing Science, Science One, TechOne programs on a full course load (minimum 12 units). Students transferring from Science One, TechOne programs on a full course load (minimum 12 units). Students transferring from other Simon Fraser University programs must have a CGPA of 2.7 on a full course load (minimum 12 units). Transfer Credit and Residency Requirements Transfer students are advised that residency requirements apply to all programs offered by the School of Engineering Science. See “Residency Requirements” on page 109.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 109 and the school’s website (www.ensc.sfu.ca) for more information. For students in engineering science, these university requirements are modified as follows:

- for students in the computer engineering, electronics engineering, systems engineering, and engineering physics options, the total number of Breadth-Social Sciences (B-Soc) and Breadth-Humanities (B-Hum) courses is reduced to three courses, with at least one course in each category
- for students in the biomedical engineering option, one course in each of the Breadth-Social Sciences (B-Soc) and Breadth-Humanities (B-Hum) categories may be waived
- the B-Soc requirements are waived for engineering science students who complete PHYS 125 and 126 instead of PHYS 120 and 121

In addition, the Canadian Engineering Accreditation Board (CEAB) requires that one complementary course in each of the five options must be taken in each of the Central Issue, Methodology, and Thought Process categories.

Engineering Science Major Program
Engineering science students develop skills in systems design along with a high level of scientific knowledge. This demanding program is aimed at the superior student. The program’s goal is to produce well educated, innovative engineer/scientists who have entrepreneurial skills and attitudes and who are oriented to new technologies. Program entry is on a competitive basis.

Students must achieve both a cumulative grade point average (CGPA) and an upper division grade point average (UDGPA) of at least 3.00 to graduate from the honors program. The honors program requires an undergraduate thesis.

The general degree program requires a CGPA and UDGPA each of at least 2.40 for graduation. If the CGPA is below 2.40 at the time of the annual progress review, the student will be required to withdraw from the School.

Students undertake a basic core of pure, applied and engineering sciences followed by studies in a specialization option. The general BASc program can be completed in four years, which includes eight semesters. A BASc (honors) typically requires an additional two semesters for thesis completion.

There are five major areas of concentration where the faculty members’ research strengths are interrelated with the undergraduate curriculum. Students should select one of the following options: electronics engineering option, computer engineering option, engineering physics option, systems option and biomedical engineering option.

ENSC courses emphasize learning, conceptualization, design and analysis. Built into the program are courses on social impacts of technology, finance, management, design methods and entrepreneurship intended to complement scientific studies. A special, integrated communications course taken throughout the program ensures that all graduates have the communication skills necessary to be effective engineers.

Co-operative Education Work Experience
Every student completes a co-op education program of at least three work terms. After the first year, students typically alternate between academic and work terms. The goal is a complementary combination of work in an industrial or research setting and study in one of the engineering options.

At least two of the three mandatory work semesters must be completed in industry (ENSC 195, 295, 395). Students may participate in additional work semesters but are encouraged to seek diversity in their experience. The three mandatory work semesters may include one special co-op term (ENSC 196, 296, 396). Special co-op may include, but is not restricted to, self-directed, entrepreneurial, service or research co-op work terms. Permission of the engineering science co-op office is required. An optional non-technical work term (ENSC 194) is also available through the engineering science co-op education office and is often taken after the first two study semesters. ENSC 194 does not count toward the mandatory three course requirement.

The engineering science co-op program will also seek opportunities for students wishing to complete their thesis requirements in an industrial setting.

BASc Requirements
All requirements of one of the five options must be completed. Each option provides a mix of basic science, general studies, engineering science, specialized engineering and science, plus project and laboratory work.
For an honors in any option, a capstone project (ENSC 440) and an undergraduate thesis (ENSC 498 and 499) must be completed.

For a general degree with any option other than engineering physics and biomedical engineering, a capstone project course (ENSC 440) must be completed. The engineering physics and biomedical engineering options are honors programs only.

Graduation with BASc (honors) requires both a cumulative grade point average (CGPA) and an upper division grade point average (UDGPA) of at least 3.0. Graduation in the general BASc program requires a 2.4 CGPA and UDGPA.

Students must complete a three term co-op education program of practical experience in an appropriate industrial or research setting leading to a project under the technical direction of a practising engineer or scientist. The internship may be within the University or off campuss. A member of the external organization and a school faculty member jointly supervise the project.

Specialized study is completed in one of five options: electronics engineering, computer engineering, engineering physics, systems and biomedical engineering (see below).

Although there is no strict requirement to follow these course sequences, taking less may lead to scheduling and prerequisite problems in subsequent semesters. Failure to take courses identified with an asterisk in the designated term will almost certainly lead to such problems. Any term with fewer than 15 credit hours requires prior approval by the director.

This program’s general studies section consists of non-technical courses which broaden education and development awareness of social, economic and managerial factors affecting engineering and scientific work. All units of the engineering communication course must be completed. In complementary studies, at least one course must deal with science and technology within society and one with central issues, methodologies and thought processes of humanities and social sciences. Other complementary studies courses may contain these subjects or may be chosen from business, arts, humanities and social sciences. Permission may be required from the appropriate department, school or faculty to enrol in some courses. A pre-approved complementary studies course list is available from the school. Other courses may be acceptable with undergraduate curriculun committee chair approval.

Engineering Science Common Core

Courses and Typical Schedule

**Term One (Fall)**
- CHEM 121-4 General Chemistry and Laboratory
- CMPT 128-3 Introduction to Computing Science and Programming
- ENSC 100-3 Engineering Technology and Society
- ENSC 101-1 Writing Process, Persuasion and Presentations
- MATH 151-3 Calculus I
- PHYS 120-3 Modern Physics and Mechanics

**Term Two (Spring)**
- CMPT 225-3 Data Structures and Programming
- ECON 103-3 Principles of Microeconomics
- ENSC 215-3 Microcontroller/Assembly Programming
- ENSC 220-3 Electric Circuits I
- MACM 101-3 Discrete Mathematics I
- MATH 251-3 Calculus III
- MATH 310-3 Introduction to Ordinary Differential Equations
- PHYS 211-3 Intermediate Mechanics
- STAT 270-3 Introduction to Probability and Statistics

**Term Four (Summer)**
- CMPT 225-3 Data Structures and Programming
- ENSC 204-1 Graphical Communication for Engineering
- ENSC 224-3 Electronic Devices
- ENSC 250-3 Introduction to Computer Architecture
- ENSC 320-3 Electric Circuits II
- KIN 201-3 Biomechanics
- MATH 254-3 Vector and Complex Analysis
- PHYS 221-3 Intermediate Electricity and magnetism
- STAT 270-3 Introduction to Probability and Statistics

**Term Five (Fall)**
- ENSC 304-1 Human Factors and Usability Engineering
- ENSC 330-4 Engineering Materials
- ENSC 370-3 Biomedical Engineering Directions
- ENSC 387-3 Numerical Methods
- PHYS 321-3 Intermediate Electricity and Magnetism

**Term Six (Fall)**
- ENSC 440-4 Capstone Engineering Science Project

**Term Seven (Spring)**
- ENSC 498-3 Engineering Science Thesis Proposal
- ENSC 499-9 Engineering Science Undergraduate Thesis

**Term Eight (Fall)**
- CMPT II-3 second complementary studies elective
- ENSC III-3 third Engineering Science elective
- ENSC IV-4 fourth Engineering Science elective
- ENSC V-5 fifth Engineering Science elective
- ENSC VI-6 sixth Engineering Science elective

**Other Requirements**
- ENSC 488-3 Engineering Science Thesis Proposal
- ENSC 499-9 Engineering Science Undergraduate Thesis

*should be taken in the designated term; consequences of deviating from this schedule are the responsibility of the student.

- one Complementary Studies course must be a course that deals with central issues, methodologies and thought processes of the humanities and social sciences (see list on ENSC website). The other must be one of GER 300-3 or PSYC 430-3.
- may be a 300 or 400 division course. The defined concentrations below set some constraints on selection of electives.
- must be a 400 division course. The defined concentrations below set some constraints on selection of electives.
- must be an approved course; consult pre-approved electives list available from the school. The defined concentrations below also set some constraints on selection of electives.

**Note:** In the typical schedule shown above, honors students will start their thesis work (ENSC 498 and 499) between semesters seven and eight. This work can be done on or off campus, either integrated with an optional (or mandatory) work term or as independent work with appropriate supervision.

**Concentrations**
- Electives must match one of the two concentrations. The Biomedical Imaging focus and 474
- Biomedical Signals and Instrumentation Concentration
- Biomedical Imaging focus
- three ENSC electives must be ENSC 374, 429, and 474
- Biomedical Electronics focus
- three ENSC electives must be ENSC 325, 425, and 429
- Biophotonics focus
- the ENSC electives must be ENSC 325, 425, 376, and 476
- Suggestions for additional electives for all concentrations are available at the ENSC website.

**Computer Engineering Option**
- The dynamic, on-going development and application of computer and digital systems requires computer systems engineers to have a balanced capability in software and hardware, and a solid engineering base.

**Courses and Typical Schedule**
- The courses and typical schedule for both general and honors are listed. The notation (G) is for general degree requirements only, while (H) is for requirements applying to the honors degree only.
Courses without (G) or (H) designations are required of both the general and honors students.

**Term Five (Spring)**
- CMPT 275-4 Software Engineering*
- MACS 201-3 Discrete Mathematics II*
- ENSC 304-1 Human Factors and Usability Engineering*
- ENSC 350-3 Digital Systems Design
- ENSC 351-4 Real Time and Embedded Systems*
- ENSC 380-3 Linear Systems* 18 credit hours

**Term Six (Fall)**
- ECON 103-3 Principles of Microeconomics
- ENSC 325-4 Microelectronics II*
- ENSC 327-4 Communication Systems*
- ENSC 383-4 Feedback Control Systems*
- ENSC 305-1 Project Documentation and Team Dynamics*
- ENSC 406-2 Social Responsibility and Professional Practice*
- ENSC 440-4 Capstone Engineering Science Project
- MACM 316-3 Numerical Analysis I 17 credit hours

**Term Eight (Fall)**
- CMPL II-3 second complementary studies elective¹
- ENSC II-4 second Engineering Science elective²
- ENSC 201-3 The Business of Engineering
- ENSC 450-3 Financial Accounting
- ENSC II-3 second science elective² 17 credit hours

**Additional Requirements for Honors**
- ENSC 498-3 Engineering Science Thesis Proposal (H)
- ENSC 499-9 Engineering Science Undergraduate Thesis (H)
  - Total 140 credit hours (G); 152 credit hours (H)
  - *should be taken in the designated term.
  - Consequences of deviating from this schedule are the responsibility of the student.
  - ¹must be an approved course. A pre-approved list of complementary studies courses is available from the School of Engineering Science.
  - ²chosen from ENSC 424, 425, 426, 427, 428, 429, 450, 481, 483, 488, 489, 495. With permission of the undergraduate curriculum committee chair, students may replace one engineering science elective with either a directed study or a special project laboratory course. Special topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.
  - ³must be an approved course; consult the pre-approved electives list available from the school. Under special circumstances, approval for other courses from the undergraduate curriculum committee chair may be granted.

**Note:** In the typical schedule shown above, honors students will start their thesis work (ENSC 498 and 499) between semesters seven and eight. This work can be done on or off campus, either integrated with an optional (or mandatory) work term or as independent work with appropriate supervision.

**Electronics Engineering Option**
This specialization within electrical engineering directly relates to microelectronics and its applications in communications, control and computing. Engineers in this field are involved with the design and fabrication of systems utilizing electronic components and subsystems.

**Courses and Typical Schedule**

The courses and typical schedule for both the general degree and the honors degree are listed below. The notation (G) is used for requirements applying to the general degree only, while the notation (H) is used for requirements applying to the honors degree only.

Courses without (G) or (H) designations are required of both the general and honors students.

**Term Five (Spring)**
- ENSC 304-1 Human Factors and Usability Engineering*
- ENSC 330-4 Engineering Materials
- ENSC 350-3 Digital Systems Design
- ENSC 351-4 Real Time and Embedded Systems*
- ENSC 380-3 Linear Systems*
- PHYS 321-3 Intermediate Electricity and Magnetism 18 credit hours

**Term Six (Fall)**
- ENSC 325-4 Microelectronics II*
- ENSC 327-4 Communication Systems*
- ENSC 383-4 Feedback Control Systems*
- Scie I-3 science elective³ 18 credit hours

**Term Seven (Spring)**
- CMPT 300-3 Operating Systems I
- ENSC I-4 first Engineering Science elective³
- ENSC 305-1 Project Documentation and Team Dynamics*
- ENSC 406-2 Social Responsibility and Professional Practice*
- ENSC 440-4 Capstone Engineering Science Project
- MACM 316-3 Numerical Analysis I 17 credit hours

**Term Eight (Fall)**
- CMPL II-3 second complementary studies elective¹
- ENSC II-4 second Engineering Science elective²
- ENSC II-3 second science elective² 17 credit hours

**Additional Requirements for Honors**
- ENSC 498-3 Engineering Science Thesis Proposal (H)
- ENSC 499-9 Engineering Science Undergraduate Thesis (H)
  - Total 142 credit hours (G); 153 credit hours (H)
  - *should be taken at this point in the program; consequences of deviations from this schedule are the responsibility of the student.
  - ¹must be an approved course. A pre-approved list of complementary studies courses is available from the School of Engineering Science.
  - ²chosen from ENSC 424, 425, 426, 427, 428, 429, 450, 481, 483, 488, 489, 495. With permission of the undergraduate curriculum committee chair, students may replace one engineering science elective with either a directed study or a special project laboratory course. Special topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.
  - ³must be an approved course; consult the pre-approved electives list available from the school. Under special circumstances, approval for other courses from the undergraduate curriculum committee chair may be granted.

**Engineering Physics (Electronics) Option**
This option prepares for work in engineering, applied sciences and is strongly dependent on a sound knowledge of physics and engineering fundamentals.

**Courses and Typical Schedule**

The courses and typical schedule for the honors degree are listed below. The Engineering Physics option is not available through the general degree.

**Term Five (Spring)**
- ENSC 304-1 Human Factors and Usability Engineering*
- ENSC 351-4 Real Time and Embedded Systems*
- ENSC 380-3 Linear Systems*
- PHYS 233-2 Introductory Physics Laboratory A*
- PHYS 321-3 Intermediate Electricity and Magnetism
- PHYS 344-3 Thermal Physics
- PHYS 365-3 Semiconductor Device Physics 19 credit hours

**Term Six (Fall)**
- ENSC 325-4 Microelectronics II*
- ENSC 327-4 Communication Systems*
- PHYS 321-3 Intermediate Electricity and Magnetism
- ENSC 498-3 Feedback Control Systems*
- PHYS 383-3 Quantum Physics
- PHYS 421-3 Electromagnetic Waves 16 credit hours

**Term Seven (Spring)**
- ENSC 305-1 Project Documentation and Team Dynamics*
- ENSC 406-2 Social Responsibility and Professional Practice*
- ENSC 440-4 Capstone Engineering Science Project
- ENSC I-4 first Engineering Science elective²
- ENSC II-4 second Engineering Science elective²
- CMPL II-3 second complementary elective¹ 18 credit hours

**Term Eight (Fall)**
- ENSC III-4 third Engineering Science elective²
- ENSC 201-3 The Business of Engineering
- TECH I-3-5 technical (computing science, science or math) elective² 18 credit hours (G); 17 credit hours (H)

**Additional Requirements for Honors**
- ENSC 498-3 Engineering Science Thesis Proposal (H)
- ENSC 499-9 Engineering Science Undergraduate Thesis (H)
  - Total 156 credit hours (G); 168 credit hours (H)
  - *should be taken in the designated term;
  - consequences of deviating from this schedule are the responsibility of the student.
  - ¹must be an approved course. A pre-approved list of complementary studies courses is available from the School of Engineering Science.
  - ²chosen from ENSC 424, 425, 426, 427, 428, 429, 450, 481, 483, 488, 489, 495. With permission of the undergraduate curriculum committee chair, students may replace one engineering science elective with either a directed study or a special project laboratory course. Special Topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.
  - ³must be an approved course; consult the pre-approved electives list available from the school. Under special circumstances, approval for other courses from the undergraduate curriculum committee chair may be granted.

**Note:** In the typical schedule shown above, students will start their thesis work (ENSC 498 and 499) between semesters seven and eight. Theses can be done on or off campus, either integrated with an optional (or mandatory) work term or as independent work with appropriate supervision.

**Electronics Engineering Option**
This specialization within electrical engineering directly relates to microelectronics and its applications in communications, control and computing. Engineers in this field are involved with the design and fabrication of systems utilizing electronic components and subsystems.

**Courses and Typical Schedule**

The courses and typical schedule for both the general degree and the honors degree are listed below. The notation (G) is used for requirements applying to the general degree only, while the notation (H) is used for
Mechatronic Systems Engineering Major Program

This major program, located at Simon Fraser University Surrey, leads to a BASc degree. Students complete a total of 144 credit hours as follows.

Courses and Typical Schedule
Students should complete the following courses, marked with an asterisk (*), in the term indicated. The consequences of deviating from this schedule are the responsibility of the student.

Term One (Fall)
- ENSC 281-3 Statics and Strength of Materials*
- CHEM 121-4 General Chemistry and Laboratory I
- ENSC 226-4 Electronic Circuits*
- MACM 316-3 Numerical Analysis I
- 18 credit hours

Term Two (Spring)
- ENSC 282-3 Fluid Mechanics*
- PHYS 344-3 Thermal Physics*
- ENSC 384-4 Mechatronics Design II* 2
- 19 credit hours

Term Three (Fall)
- ENSC 383-4 Control Systems*
- MACM 316-3 Numerical Analysis II
- 18 credit hours

Term Four (Summer)
- ENSC 380-3 Linear Systems*
- ENSC 381-3 Systems Modelling and Simulation*
- ENSC 382-3 Machine Design*
- 18 credit hours

Term Five (Fall)
- ENSC 385-4 Computer Aided Design and Manufacturing*
- ENSC 389-4 Introduction to Electromechanical Sensors and Actuators**
- 19 credit hours

Term Six (Fall)
- ENSC 387-4 Introduction to Electromechanical Sensors and Actuators*
- SciE I-3 science elective (G)
- 18 credit hours

Term Seven (Spring)
- ENSC 384-4 Mechatronics Design II* 2
- 19 credit hours

Term Eight (Fall)
- ENSC 385-4 Computer Aided Design and Manufacturing*
- ENSC 389-4 Introduction to Electromechanical Sensors and Actuators*
- SciE I-3 science elective (G)
- 18 credit hours

Additional Requirements for Honors
ENSC 498-3 Engineering Science Thesis Proposal (H)
ENSC 499-9 Engineering Science Undergraduate Thesis (H)
- Total 140 credit hours (G); 152 credit hours (H)
- *should be taken in the designated term;
- consequences of deviating from this schedule are the responsibility of the student.
- **must be an approved course. A pre-approved list of complementary studies courses is available from the School of Engineering Science.
- chosen from ENSC 424, 425, 426, 427, 428, 429, 450, 481, 495. With permission of the undergraduate curriculum committee chair, students may replace one engineering science elective with either a directed study or a special project laboratory course. Special Topics courses that have been approved by the undergraduate curriculum committee chair and the director may be counted here.
- must be an approved course; consult the pre-approved electives list available from the school. Under special circumstances, approval for other courses from the undergraduate curriculum committee chair may be granted.

Note: In the typical schedule shown above, honors students will start thesis work (ENSC 498 and 499) between semesters seven and eight. This work can be done on or off campus, either integrated with an optional (or mandatory) work term or as independent work with appropriate supervision.
education with an applied orientation. This program may be satisfied either through the general applied sciences option or through the double minor option.

**General Applied Sciences Option**

Students must complete 30 credit hours of upper division Faculty of Science and Faculty of Applied Sciences courses subject to the following:

- no more than nine credit hours of these courses may be from the Faculty of Science
- no more than 12 credit hours of these courses may be taken from any one school in the Faculty of Applied Sciences
- Faculty of Applied Sciences residency requirements must be satisfied. See “Residency Requirements” on page 109.

• A 2.00 GPA is required on the courses used for the general applied sciences option.

For this requirement, MACM courses are counted as School of Computing Science courses.

**Double Minor Option**

Students may satisfy the double minor option by taking two minors (or extended minors), at least one of which must be in the Faculty of Applied Sciences. If the only minor from the Faculty of Applied Sciences is in the School of Communication, the second minor must be from the Faculty of Science or the Faculty of Applied Sciences.

**Overall Degree Requirements**

Students must complete 120 credit hours overall for the degree, including 45 upper division credit hours. A 2.00 graduation GPA and UGPA is required.

**Admission Requirements**

Faculty of Applied Sciences students may apply for admission to either the general applied sciences option or the double minor option at any time. Students in other faculties may apply for the double minor option upon acceptance into two qualifying options. In addition, limited spaces are available for students transferring to the general applied sciences option from other faculties. Admission is competitive, based on a GPA in upper division applied sciences courses. To be considered, students must have successfully completed at least nine credit hours of upper division applied sciences courses with a GPA of 2.25.

Enrolment in the upper division courses of a particular school may be limited to those Bachelor of General Studies students who also meet the admission standards of that school. Admission to the BGS program may not be used to bypass the enrolment limitations of any other applied sciences program.

**Geographic Information Science Program**

8800 level Technology and Science Complex 2

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<th>Advisors</th>
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<tbody>
<tr>
<td>Ms. M. Black MA (Royal Roads), 778.782.3254 Tel</td>
</tr>
<tr>
<td>Ms. L. McGregor BComm (McM), 778.782.5332 Tel</td>
</tr>
</tbody>
</table>

**Lower Division Requirements**

Students must complete all of:

CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
CMPT 225-3 Data Structures and Programming
GEOG 100-3 Human Geography I
GEOG 111-3 Physical Geography
GEOG 250-3 Cartography
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I
MATH 151-3 Calculus I
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 152-3 Calculus II
MATH 223-3 Linear Algebra
and one of:
GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Biogeography
GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
GEOG 261-3 Introduction to Urban Geography
and one of:
GEOG 251-3 Quantitative Geography
STAT 270-3 Introduction to Probability and Statistics

**Upper Division Requirements**

Students must complete all of:

CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems I
CMPT 361-3 Introduction to Computer Graphics
and one of:
CMPT 300-3 Operating Systems I
CMPT 363-3 User Interface Design
CMPT 371-3 Data Communications and Networking
CMPT 384-3 Symbolic Computing
and three of:
GEOG 351-4 Cartography and Visualization
GEOG 352-4 Spatial Analysis
GEOG 353-4 Remote Sensing
GEOG 355-4 Geographical Information Science II
and two of CMPT 406-3 Computational Geometry
CMPT 412-3 Computational Vision
CMPT 454-3 Database Systems II
CMPT 461-3 Advanced Computer Graphics
CMPT 470-3 Web-based Information Systems
and two of GEOG 451-4 Spatial Modelling
GEOG 453W-4 Remote Sensing of Environment
GEOG 455-4 Theoretical and Applied GIS
and four additional upper division credit hours in physical or human geography. Students should consult with the program advisor in choosing these credit hours.
and three additional upper division credit hours in CMPT or MACM courses. (45 credit hours)

Honors Program

Lower Division Requirements
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
CMPT 275-4 Software Engineering I
GEOG 100-3 Human Geography I
GEOG 111-3 Physical Geography
GEOG 250-3 Cartography I
GEOG 253-3 Aerial Photographic Interpretation
GEOG 298-3 Geographical Information Science I
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 232-3 Linear Algebra
and one of GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Biogeography
and one of GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
GEOG 261-3 Introduction to Urban Geography
and one of GEOG 251-3 Quantitative Geography
STAT 270-3 Introduction to Probability and Statistics

Upper Division Requirements

Students must complete all of CMPT 300-3 Operating Systems I
CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems I
CMPT 361-3 Introduction to Computer Graphics
CMPT 406-3 Computational Geometry
CMPT 454-3 Database Systems II
GEOG 491-4 Honors Essay
MACM 316-3 Numerical Analysis I
and three of GEOG 351-4 Cartography and Visualization
GEOG 352-4 Spatial Analysis
GEOG 353-4 Remote Sensing
GEOG 355-4 Geographical Information Science II
and three of CMPT 363-3 User Interface Design
CMPT 371-3 Data Communications and Networking
CMPT 384-3 Symbolic Computing
CMPT 412-3 Computational Vision
CMPT 461-3 Advanced Computer Graphics
CMPT 470-3 Web-based Information Systems
and two of GEOG 451-4 Spatial Modelling
GEOG 453-4 Remote Sensing of Environment
GEOG 455-4 Theoretical and Applied GIS
and four additional upper division credit hours in physical or human geography. Students should consult with the geography program advisor when choosing these credit hours. (58 credit hours)

Admission, continuation and graduation are contingent upon maintaining 3.00 or better on all relevant grade point averages (cumulative GPA, upper division GPA, computing science GPA, computing science upper division GPA, geography GPA, geography upper division GPA).

Co-operative Education

Students are strongly encouraged to enroll in co-op education. Geographic Information Science students will be in great demand while they are still completing the program. The number of co-op posting requests exceeds the supply by a large margin. Co-op employers are actively seeking students with broad GIS skills, especially programming, database management, and statistics, in addition to substantive knowledge in geography and resource management.

School of Interactive Arts and Technology

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7474 Tel, 778.782.7488 Fax, www.siat.sfu.ca

Programs Offered
• Bachelor of Arts with Major in Interactive Arts and Technology
• Bachelor of Arts (Honors) in Interactive Arts and Technology
• Bachelor of Science with Major in Interactive Arts and Technology
• Bachelor of Science (Honors) in Interactive Arts and Technology
• Minor in Interactive Arts and Technology

The following programs have been phased out. They are available to students admitted in September 2002 or earlier.
• Bachelor of Science (Information Technology, TechBC)
• Bachelor of Science (Interactive Arts, TechBC)

Admission Requirements

Admission to the school is through three routes.

Route 1
• direct admission from BC high school 12 or equivalent high school preparation in accord with the requirements listed under the Admission and Readmission section (see “British Columbia and Yukon Applicants” on page 21).

Route 2
• internal transfer from another Simon Fraser University program; the normal choice will be TechOne

Route 3
• direct transfer from another post-secondary institution

In routes 2 and 3, students apply to either the BA or BSc program after completing at least 18 credit hours of the lower division requirements listed below or equivalents. In route 2, minimum of six credit hours of iAT course work is required. Admission is competitive based on the student’s cumulative grade point average. Students who are unsuccessful in their first admission application may improve their average by completing additional courses.
Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative, and Breadth Requirements" on page 7.

Major Program

Students must complete the following:
• lower division requirements of 12 credit hours of approved first year courses and the SIAT core requirements
• upper division requirements of at least one of the three concentrations in SIAT
• lower and upper division requirements of either the BA or BSc degree program
• at least 120 credit hours including at least 45 upper division credit hours.

Students enter the major in interactive arts and technology program by meeting the admission requirements specified above. Students will normally apply to either the BA or BSc program after completion of first year or its equivalent.

Lower Division Core Requirements

Students complete approved 12 credit hours of first year course work showing evidence of breadth, communication, teamwork and project skills. The TechOne program, with a suitable choice of electives, meets these requirements by design.

SIAT lower division core requirements are as follows. IAT 100-3 Systems of Media Representations IAT 102-3 Graphic Design IAT 265-3 Multimedia Programming for Art and Design (or other approved second year programming course)* plus an approved introduction to programming course (CMPT 120 or equivalent*) plus an introductory course in human computer interaction and cognition (IAT 201 or equivalent*) plus introductory courses reflecting the schools concentrations (IAT 233, 202, 287*) plus an introductory course to art and culture (IAT 222 or equivalent*) plus an introductory design course on designing information interfaces IAT 235 or equivalent*
*these courses or their equivalents must have a science designation

Upper Division Core Requirements

Three Concentrations

The school offers a general program leading to BSc and BA degrees with a major or honors. Students choose one of three concentrations: design, media arts, informatics (see below). All concentrations share a fundamental concern with people using technology in context. Each draws from distinct patterns of scholarship and thinking. Each has its own academic emphasis leading directly to its particular pattern of study and graduate outcome.

Concentration in Media Arts

This concentration is concerned with the creation, analysis and understanding of new media. New media environments are both computational artifacts and cultural experiences that include a study of historical, social, aesthetic, and economic processes. Graduates of this concentration will be skilled in the critical analysis and in the making of new media forms such as electronic games, digital video, computer animation, and interactive multimedia.

Students pursuing this concentration must complete the following courses.

IAT 313-3 Narrative and New Media IAT 320-3 Body Interface IAT 343-3 Animation IAT 344-3 Moving Images IAT 443-3 Interactive Video IAT 445-3 Immersive Environments

Concentration in Informatics

This concentration studies technological systems used by people in work, learning and play situations. Its emphasis is on system building with particular emphasis on how people use systems, how to design and program used-centered systems, and how to represent and reason about the objects and environments that people use. Its graduates will be able to make systems that people find useful and engaging.

Students pursuing this concentration must complete the following courses.
IAT 351-3 Advanced Human-Computer Interaction IAT 352-3 Knowledge Media Architectures IAT 355-3 Introduction to Visual Analytics IAT 410-3 Advanced Game Design IAT 452-3 Developing Design Tools IAT 455-3 Computational Media

Concentration in Design

This concentration focuses on the design and use of interactive products and systems. It emphasizes designing and understanding all aspects of successful designs. Graduates will demonstrate ability in contemporary design from requirements through design to critique and evaluation.

Students pursuing this concentration must complete the following courses.
IAT 333-3 Interaction Design Methods IAT 334-3 Interface Design IAT 336-3 Materials in Design IAT 337-3 Representation and Fabrication IAT 338-3 Interactive Objects and Environments IAT 431-3 Speculative Design

BSc Degree Specific Requirements

Students pursuing the BSc credential must complete both lower and upper division core requirements as specified above, plus the following.

Lower Division Requirements

MACM 101-3 Discrete Mathematics I (or equivalent) plus one additional three credit hour lower division science course chosen from computing science, engineering science, kinesiology, mathematics, statistics, or physics.

Upper Division Requirements

Students must complete IAT 402-3 Interdisciplinary Design Studio I (Science) IAT 404-3 Interdisciplinary Design Studio II (Science) and 24 credit hours chosen from the following, 18 credit hours of which must be IAT courses.
IAT 333-3 Interaction Design Praxis: Practice and Methods IAT 337-3 Representation and Fabrication IAT 351-3 Advanced Human-Computer Interaction IAT 352-3 Knowledge Media Architectures IAT 355-3 Introduction to Visual Analytics IAT 410-3 Advanced Game Design IAT 432-3 Design Evaluation IAT 452-3 Developing Design Tools IAT 455-3 Computational Media IAT 484-3 Special Topics in Technology in Art and Design

BA Degree Specific Requirements

Students pursuing the BA credential must complete both lower and upper division core requirements as specified above, plus the following.

Lower Division Requirements

IAT 206-3 Media Across Cultures (or equivalent) MATH 130-3 Geometry for Computer Graphics (or equivalent)

Upper Division Requirements

Students must complete IAT 403-3 Interdisciplinary Design Studio I (Arts) IAT 405-3 Interdisciplinary Design Studio II (Arts) and 24 credit hours chosen from the following, 18 credit hours of which must be IAT courses.
IAT 312-3 Foundations of Game Design IAT 313-3 Narrative and New Media IAT 320-3 Body Interface IAT 332-3 Interactive Installation and Performance* IAT 334-3 Interface Design IAT 343-3 Animation IAT 344-3 Moving Images IAT 431-3 Speculative Design IAT 443-3 Interactive Video IAT 445-3 Immersive Environments IAT 483-3 Special Topics in New Media Environments *and any upper division course from communication, cognitive science, contemporary arts, human geography, philosophy, business, or psychology

Honors Program

An honors degree in Interactive Arts and Technology is available in all three concentrations: design, media arts, and informatics.

Lower Division Requirements

Students complete the same lower division requirements as for the major program (see above).

Upper Division Requirements

Students must complete the requirements for a major plus additional IAT electives for a total of at least 48 upper division credit hours. Honors students must complete the Honors Research Project sequence, IAT 490 and 491. This is an individual supervised study and research project open only to honors students.

In addition, students must take sufficient unspecified upper division courses to complete a minimum of 60 upper division credit hours total, and unspecified courses at any level to total 132 credit hours overall. For graduation with honors, a 3.0 or better GPA is required on two measures: CGPA and UDGPA.

Minor Program

A minor in Interactive Arts and Technology consists of 9 credits from the SIAT lower division core: IAT 100, 102, 201, 202 (or 101), 222, 233, 235, 265, 267.

Lower Division Requirements

Students must complete nine credit hours from the major program’s lower division core requirements: IAT 100, 102, 201, 202 (or 101), 222, 233, 235, 265, 267.

Upper Division Requirements

Students must complete 15 upper division IAT credit hours. It should be recognized that some upper division courses have lower division prerequisites.

Co-operative Education

Arrangements for the work experiences are made through the school’s co-op co-ordinators and the University’s office of Co-operative Education. See “Co-operative Education” on page 237.

Simon Fraser University 2007 • 2008 Calendar
School of Kinesiology
K9625 Shrum Science Centre, 778.782.3573 Tel, 778.782.3040 Fax, http://fas.sfu.ca/kin

Director
P.C. Ruben, BSc, MSc (G Washington), PhD (Calg)

Professors Emeriti
E.W. Banister BSc (Manc), MPE (Br Coll), PhD (Ill), FASCM
T.W. Calvert BSc(Eng) (Lond), MSEE (Wayne), PhD (Carnegie Tech), PEng
A.E. Chapman Dip Phys Ed (Lough), MA (Ohio), MPHill, PhD (Lond)
A.J. Davison BSc (Cape Town), MSc, PhD (Rutgers)
J. Dickinson BA (Birm), PhD (Nott)
J.B. Morrison BSc (Glas), PhD (Strath), ARCST
W.D. Ross BPE (Br Coll), MA, MS, PhD (Ore), FASCM
H. Weinberg BSc, MSc, PhD (Washington)

Professors
P.N.S. Bawa BSc, MSc (Panjab), MSc, PhD (Alta)
D.T. Finegood BSc (Mich), MS (Northwestern), PhD (Calif)
D. Goodman BPE, MPE (Br Coll), PhD (Iowa)
J.A. Hoffer BS (Mudd), PhD (Johns H)
C. Krieger MD (Tor), MSc (Montr), PhD (London)
C.L. MacKenzie BSc, MSc, PhD (Wat)
R.G. Martenius BPE, MA (Alta), EdD (Calif)
T.E. Milner BSc, MSc, PhD (Alta)
W.S. Parkhouse BPE (Alta), MPE, PhD (Br Coll)
M.P. Ross BSc (Sask), PhD (Torr)
G.F. Tibbits BEd (McG), MS, PhD (Calif), Canada

Research Chair
I. Rossberg-Gempton BA (S Fraser), MA (WLaur),

Associate Professors
A.P. Blaber BSc (Guelph), BEd (WOnt),
M. Gray BSc, MSc (S Fraser), PhD (Wat)
S.N. Robinovitch BASc (Br Coll), MSc (MIT), PhD (Harvard/MIT)*

Assistant Professors
M. Donelan BKIn (McM), MA, PhD (Calif)
S.A. Lear BSc (S Fraser), PhD (Br Coll)
A.V. Veiera BSc (Calg), PhD (Alta)
M.D. White BSc, MSc (S Fraser), PhD (Laval)

Adjunct Professors
J.M. Berry BSc (Wis), PhD (Br Coll)
L. Hove-Madsen BSc, MSc, PhD (Aarhus, Denmark)
A.J. Lomax MBChB (Manc), DObst (Royal College of Obstetrics and Gynaecology), FRCS
P. Pretorius BSc, MSc (Potchefstroom), DSc (Amst)
D. Robinson BSc (Br Coll), MSc, PhD (S Fraser)
I. Rossberg-Gempton BA (S Fraser), MA (WLaur),
PhD (S Fraser)
R.A. Strath MSc (Br Coll), PhD (Alta), OD (New Eng Optometry)
Zhang BDS Dentistry (Western China), PhD (Torr)

Senior Lecturers
J. Anthony BSc, MSc (Madr), PhD (All India IMS)
R.C. Asmundson BSc, MSc (S Fraser)
S. Brown BSc, MSc (S Fraser)
A.J. Leyland BEd (Exe), MSc (S Fraser)
R. Ward BSc (Lough), MSc, PhD (S Fraser)

Lecturer
R. Dill BSc, MSc (S Fraser)

Mission
Our mission is to study human structure and function and their relation to health and movement. We seek to advance, apply and disseminate relevant knowledge and expertise.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
Admission Requirements
Entry to the bachelor of science (kinesiology) program is possible via
• direct admission from high school
• transfer from a recognized post-secondary institution
• internal transfer from within Simon Fraser University

Admission is competitive. A separate admission average for each of the three entry routes is established each term, depending on spaces available and subject to the dean’s approval.

Programs
The school offers programs leading to a BSc (Kinesiology). BSc honors (Kinesiology), minor in kinesiology, post baccalaureate diploma in kinesiology, certificate in applied human nutrition, and certificate in health and fitness studies. Co-op education helps kinesiology majors gain valuable work experience during their undergraduate studies.

Areas of concentration offer cross-disciplinary undergraduate programs specializing in the following complementary areas.

• active health and rehabilitation kinesiology
• health and physiological sciences
• human factors/ergonomics

Choosing an area of concentration is not necessary to receive a BSc (Kinesiology); a general kinesiology option is available. The general option and the three areas of concentration include a common core covering basic anatomy, physiology, biomechanics and prerequisite knowledge from the biological, chemical, physical and mathematical sciences fundamental to understanding human structure and function. The ‘core’ refers to those aspects that are required for the degree, regardless of concentration.

All kinesiology major and honors programs are accredited with the Canadian Council of University Physical Education and Kinesiology Administrators (CCUPEKA).

Teaching Certification
Kinesiology students with appropriate courses may apply to the British Columbia College of Teachers (BCTT) to have their degree accepted for professional certification. BCTT reviews each application individually. Contact the School of Kinesiology for more information.

Prerequisite Course Grade
Students wishing to enroll in kinesiology courses must have obtained a grade of C- or better in prerequisite courses.
Students may apply for admission as soon as the five required courses have been completed. Unsuccessful applicants may take any of the 10 additional courses to improve the admission GPA. A C- or better grade is required in each course used for the admission application. Students who do not meet the kinesiology admission GPA upon completion of all four additional courses will be advised about alternative options.

For students transferring some of core courses from another post secondary institution: only courses completed at Simon Fraser University (and not previously taken elsewhere) are used in the kinesiology admission GPA. Normally, at least 15 credit hours from core courses are required as a basis for the GPA calculation. Exceptions must be approved by the school.

**Application Procedure**

Students should complete a program approval form available at the kinesiology general office and submit it to the kinesiology advisor by July 1 for fall term approval, November 1 for spring term approval, or March 1 for summer term approval.

**Program Requirements**

Please read descriptions of required courses before enrolling in the major or honors program (see “Kinesiology KIN” on page 421). The following is a summary outline of the general degree requirements for a bachelor of science (kinesiology).

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division requirements</td>
<td>12 credit hours</td>
</tr>
<tr>
<td>Faculty of Science (lower division specified)</td>
<td>34 credit hours</td>
</tr>
<tr>
<td>Kinesiology (upper division specified)</td>
<td>13 credit hours</td>
</tr>
<tr>
<td>Kinesiology (upper division unspecified)</td>
<td>27 credit hours</td>
</tr>
<tr>
<td>Electives (lower division partially specified)</td>
<td>6 credit hours</td>
</tr>
<tr>
<td>Electives (upper division unspecified)</td>
<td>5 credit hours</td>
</tr>
<tr>
<td>Free electives (upper or lower division unspecified)</td>
<td>23 credit hours</td>
</tr>
</tbody>
</table>

**Total 120 credit hours**

**Areas of Concentration**

The school offers three areas of concentration for those wishing to take a more specialized approach to their studies in kinesiology. They are as follows:

1. **active health and rehabilitation kinesiology**
2. **ergonomics/human factors**
3. **health and physiological sciences**

Students majoring in kinesiology may choose the general program or one of the three concentrations. Each concentration has specific course requirements that go beyond the general requirements for a major.

**Lower Division Requirements**

The lower division requirements of the kinesiology major program are structured in terms of a common set of core courses for all majors, an additional set of required courses for those students choosing to specialize in one of the concentrations and breadth requirements that apply to all majors.

**Lower Division Core**

The following courses are specified for all majors.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBB 221-3</td>
<td>Cellular Biology and Biochemistry</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>BSC 101-4</td>
<td>General Biology</td>
<td>4 credit hours</td>
</tr>
<tr>
<td>CHEM 121-4</td>
<td>General Chemistry and Laboratory I</td>
<td>10 credit hours</td>
</tr>
<tr>
<td>CHEM 122-2</td>
<td>General Chemistry II</td>
<td>10 credit hours</td>
</tr>
</tbody>
</table>

**Kinesiology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 142-3</td>
<td>Introduction to Kinesiology</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 201-3</td>
<td>Biomechanics</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 205-3</td>
<td>Introduction to Human Physiology</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 207-3</td>
<td>Information Processing in Human Motor Systems</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

**Mathematics**

- One of
  - MATH 150-4: Calculus I with Review
  - MATH 151-3: Calculus I
  - MATH 154-3: Calculus I for the Biological Sciences

**Physics**

- One of
  - PHYS 101-3: General Physics I
  - PHYS 120-3: Modern Physics and Mechanics
  - PHYS 125-3: Mechanics and Special Relativity
  - PHYS 140-4: Studio Physics–Mechanics and Modern Physics

**Statistics**

- STAT 201-3: Statistics for the Life Sciences

**Concentration Requirements**

Students choosing to specialize in one of the kinesiology concentrations must complete additional lower division courses as specified below.

**Active Health and Rehabilitation Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 110-3</td>
<td>Human Nutrition: Current Issues</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 140-3</td>
<td>Contemporary Health Issues</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 143-3</td>
<td>Exercise Management</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>KIN 241-3</td>
<td>Sports Injuries: Prevention and Rehabilitation</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

**Ergonomics and Human Factors Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN 180-3</td>
<td>Introduction to Ergonomics</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

**Health And Physiological Sciences Concentration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 126-2</td>
<td>General Chemistry Laboratory II</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>CHEM 282-2</td>
<td>Organic Chemistry II</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>CHEM 286-2</td>
<td>Organic Chemistry Laboratory II</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>MBB 222-3</td>
<td>Molecular Biology and Biochemistry</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

**Breadth Requirements**

For students admitted to Simon Fraser University prior to September 2006, a minimum of six credit hours must be selected from the Faculty of Arts and Social Sciences.

For students admitted September 2006 or later, a minimum of six credit hours each of designated humanities breadth (B-Hum) and social sciences breadth (B-Soc) must be completed. At least three credit hours of lower division course work should also be writing-intensive (W). The quantitative (Q), science breadth (B-Sci) and undesignated breadth (UB) requirements are satisfied through completion of the kinesiology lower division core and hence do not require additional work. For more information, see www.sfu.ca/ugcr.

**Upper Division Requirements**

Students majoring in kinesiology must complete the general program or one of the three concentrations. The upper division requirements of each of these options is structured in terms of an upper division core common to all options plus additional upper division requirements specific to the option.

**Upper Division Core**

The following courses are required of all majors and must each be completed with a grade of C- or higher.

- KIN 304-3: Inquiry and Measurement in Kinesiology (W)\(^1\)
- KIN 305-3: Human Physiology I
- KIN 306-3: Human Physiology II
- KIN 326-4: Functional Anatomy
- KIN 340-3: Active Health: Behavior and Promotion

**Upper Division Core**

- KIN 301-3: Biomechanics Laboratory
- KIN 407-3: Human Physiology Laboratory
- 19 credit hours

\(^1\)KIN 304 satisfies the University's breadth requirement of three upper division credit hours in writing that is typical of the discipline

**KIN 301-3** is required for students specializing in the ergonomics and human factors concentration.

**General Program**

Students must take an additional 21 kinesiology upper division credit hours, excluding courses reserved for the minor program (KIN 325-3 and 342-3) or the honors program (KIN 497-3 and 499-12). MBB 321-3 may be used to satisfy three credit hours of this requirement. Total 40 credit hours

For the degree, students must also complete an additional five upper division credit hours chosen from any discipline within the University.

**Total 45 credit hours**

Students admitted in September 2006 or subsequently must also complete WGB requirements with three credit hours of writing-intensive credit at the upper division. This may be included within the 45 credit hour total for the degree. For more information, see www.sfu.ca/ugcr.

**Active Health and Rehabilitation Concentration**

Students choosing this concentration must complete

- KIN 303-3: Kinanthropometry
- KIN 310-3: Exercise/Work Physiology
- KIN 343-3: Active Health: Assessment and Programming
- 9 credit hours and four of
- KIN 311-3: Applied Human Nutrition
- KIN 312-3: Nutrition for Fitness and Sport
- KIN 375-3: Human Growth and Development
- KIN 412-3: Molecular and Cellular Cardiology
- KIN 426-3: Neuromuscular Anatomy
- KIN 431-3: Environmental Carcinogenesis
- KIN 444-3: Cardiac Rehabilitation
- KIN 445-3: Advanced Cardiac Rehabilitation
- KIN 446-3: Neurobiology of Disease
- KIN 448-3: Rehabilitation of Movement Control
- KIN 461-3: Physiological Aspects of Aging
- KIN 467-3: Human Motor Control
- KIN 481-3: Activity-Generated Musculo-Skeletal Disorders
- 3 credit hours

*Can be counted towards area of concentration if relevant to active health or rehabilitation kinesiology. Please see the head of the area of concentration for
Permission to count any of these courses towards the area of concentration requirement. 24 credit hours
Total 43 credit hours

For the degree, students must also complete an additional two credit hours of upper division work chosen from any discipline within the University. 2 credit hours
Total 45 credit hours

Students admitted September 2006 or subsequently must also complete WQB requirements with 3 credit hours of writing-intensive credit at the upper division. This may be included within the 45 credit hour total for the degree. For information, see www.sfu.ca/ugcr.

Ergonomics and Human Factors Concentration

Students choosing this concentration must complete KIN 303-3 Kinanthropometry
KIN 310-3 Exercise/Work Physiology
KIN 380-3 Occupational Biomechanics
KIN 381-3 Psychology of Work
KIN 382-3 Physical Hazards in the Workplace
KIN 383-3 Human-Machine and Human-Computer Interaction
KIN 481-3 Activity-Generated Musculoskeletal Disorders
KIN 486-3 Ergonomics in Industrial Design
KIN 488-3 Ergonomics Laboratory
and two of KIN 343-3 Active Health: Assessment and Programming
KIN 367-3 Psychology of Motor Skill Acquisition
KIN 402-3 Mechanical Properties of Tissues
KIN 407-3 Human Physiology Laboratory
KIN 415-3 Neural Control of Movement
KIN 416-3 Control of Limb Mechanics
KIN 442-3 Biomedical Systems
KIN 448-3 Rehabilitation of Movement Control
KIN 461-3 Physiological Aspects of Aging
KIN 484-3 Attitude and Aerospace Physiology
KIN 485-3 Human Factors in the Underwater Environment
CMNS 354-3 Communications and Social Issues in Design
KIN 420-3 Selected Topics I*
KIN 421-3 Selected Topics II*
KIN 422-3 Selected Topics III*
KIN 423-3 Selected Topics IV*
KIN 426-3 Neuromuscular Anatomy
KIN 430-3 Human Energy Metabolism
KIN 431-3 Environmental Carcinogenesis
KIN 442-3 Biomedical Systems
KIN 446-3 Neurobiology of Disease
KIN 448-3 Rehabilitation of Movement Control
KIN 484-3 Attitude and Aerospace Physiology
KIN 496-3 Directed Study I
KIN 498-3 Directed Study II*

*must be selected topics courses in physiology
27 credit hours
Total 46 credit hours

For the degree, students admitted September 2006 or subsequently must also complete WQB requirements with three credit hours of writing-intensive credit at the upper division. This may be included within the 46 credit hour total. For more information, see www.sfu.ca/ugcr.

Free and Partially Specified Electives

A total of 23 credit hours of electives are required. Of these 23, six credit hours must be taken from the social science and humanities course list (see "Social Science and Humanities Course List, Breadth Designated Courses" below) to meet CCUPEKA certification requirements. These 23 credit hours must also include courses that will satisfy the University breadth requirements of six credit hours each of designated humanities breadth (B-Hum) and social science breadth (B-Soc). However, courses from the social science and humanities course list that have B-Hum or B-Soc designation may be used to satisfy both requirements.
23 credit hours
Total 120 credit hours

Social Science and Humanities Course List, Breadth Designated Courses

ARCH 105-3 The Evolution of Technology B-Soc
ARCH 201-3 Introduction to Archaeology B-Soc
CMNS 354-3 Communications and Social Issues in Design
COGS 100-3 Introduction to Cognitive Science B-Hum, B-Soc, B-Sci
CRIM 355-3 The Forensic Sciences B-Soc
FPA 129-3 Fundamental Integration of Human Movement
GEOG 388-3 Geography, Health and Health Care
GERD 303-3 Introduction to Gerontology B-Soc
GERD 302-3 Health Promotion and Aging
GERD 404-3 Health and Illness in Later Life
GERD 420-4 Sociology of Aging
HIST 409-3 Disease and Society
HUM 227-3 Introduction to the Study of the Future B-Hum
PHIL 100-1 Critical Thinking
PHIL 100-1 Knowledge and Reality B-Hum
PHIL 110-3 Introduction to Logic and Reasoning
PHIL 120-3 Introduction to Moral Philosophy B-Hum
PHIL 210-4 Natural Deductive Logic
PHIL 244-3 Introduction to the Philosophy of Natural and Social Science
PHIL 300-3 Introduction to Philosophy B-Hum
PSYC 100-3 Introduction to Psychology I B-Soc
PSYC 102-3 Introduction to Psychology II B-Soc
PSYC 106-3 Psychological Issues in Contemporary Society B-Soc
PSYC 365-3 Health Psychology
SA 101-4 Introduction to Anthropology B-Soc
SA 150-4 Introduction to Sociology B-Soc
SA 218-4 Illness, Culture and Society
SA 318-3 Anthropology of Medicine

Requirements to Transfer to Professional Schools

Students are eligible to receive a BSc (Kinesiology) degree after completion of the second year of professional study. Students must have completed at least 90 credit hours of Simon Fraser credit comprising the following.

• all lower division requirements
• 27 upper division credit hours in kinesiology (including KIN 305, 306, 326, and either 301 or 407)

Courses taken in the professional program must not duplicate courses already taken at Simon Fraser University and must be acceptable for transfer credit to the University. Candidates apply for transfer credit and for receipt of the degree through Student Services.

Suggested Course Pathways

Suggested course selections for majors and any of the three areas of concentration are available from the kinesiology general office.

Typical First Year Course Schedule

Term 1
KIN 142-3 Introduction to Kinesiology
BISC 101-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
MATH 154-3 Calculus I for the Biological Sciences

Term 2
CHEM 222-4 Organic Chemistry I
MATH 155-3 Calculus II for the Biological Sciences
PHYS 101-3 General Physics I

Honors Program

The honors program is designed for approved kinesiology major students who wish to pursue an advanced degree in kinesiology.

Application Requirements

Honors program application requirements include the following.

• completion of a minimum of 60 credit hours
• a minimum CGPA of 3.00
• submission of a completed program approval form, along with the student's most recent unofficial record, to the undergraduate advisor.

Graduation Requirements

To graduate with honors, the student must successfully complete

• a minimum of 132 credit hours, with a minimum of 60 upper division credit hours of which at least 54 must be in kinesiology
• completion of all kinesiology major program requirements
• KIN 497-3 and KIN 499-12

Note: honors students may count only one of either KIN 496 or 498 towards their 27 upper division elective kinesiology credit hours.
Minor Program

Application Requirements
Application for a minor in kinesiology requires the following.
• completion of KIN 105 or 205 or 208, and KIN 142 and 143 with a minimum grade of C- in each course
• completion of two of KIN 110, 201, 207 or 241 with a minimum grade of C- in each
• submission of a program approval form to the undergraduate advisor.

Admission is competitive. An admission GPA is established each term and will be calculated on the five required courses listed above. If one or more courses have been duplicated (repeated), the grades from all course attempts will be used equally in calculating the kinesiology admission GPA.

Program Requirements
There is a maximum number of allowable transferable credit hours that count toward the minor program from any other institution, including the Open Learning Agency. See "Residency Requirements" on page 109.

Students must complete one of KIN 105-3 Fundamentals of Human Structure and Function* or KIN 205-3 Introduction to Human Physiology, and both of KIN 110-3 Human Nutrition: Current Issues* and KIN 201-3 Biomechanics. KIN 207-3 Information Processing in Human Motor Systems and KIN 241-3 Sports Injuries — Prevention and Rehabilitation and one of KIN 325-3 Basic Human Anatomy or KIN 342-3 Active Health. KIN 343-3 Active Health: Assessment and Promotion and KIN 367-3 Psychology of Motor Skill Acquisition plus 12 additional credit hours of upper division kinesiology courses required. A minimum GPA of 2.0 calculated over all kinesiology courses used to satisfy the requirements is required as well as a minimum upper division GPA of 2.0 calculated from those upper division kinesiology courses used to satisfy the requirements.

Certificate in Applied Human Nutrition
This certificate is intended for professionals who are not dietitians nor nutritionists, but are concerned with health and wellness promotion such as nurses, kinesiologists, professional coaches and personal trainers, teachers, trained food service supervisors, dietary technicians, pharmacists and clinical psychologists. The purpose is to provide these professionals with an enhanced understanding of the relationships among food, body composition, health, and human performance.

Please note that this certificate does not qualify the individual as a registered dietitian.

Admission is governed by the University’s admissions regulations. See “British Columbia and Yukon Applicants” on page 21. After being admitted to the University, submission of a completed program approval form to the kinesiology undergraduate advisor is required for formal acceptance in the program.

Requirements
There is an allowable transferable credit maximum that counts toward the certificate program from any other institution, including the Open Learning Agency. See "Residency Requirements" on page 109.

Students must complete one of KIN 105-3 Fundamentals of Human Structure and Function* or KIN 205-3 Introduction to Human Physiology, KIN 208-3 Introduction to Physiological Systems and all of KIN 110-3 Human Nutrition: Current Issues*, KIN 111-3 Food and Food Safety*, KIN 212-3 Food and Society*, KIN 311-3 Applied Human Nutrition, KIN 342-3 Active Health*, KIN 375-3 Human Growth and Development* and KIN 407-3 Human Physiology Laboratory.

Students must also complete nine credit hours (three courses) of electives chosen from the following. Only three of these credit hours may be from 100 division courses.

GERO 302-3 Health Promotion and Aging†
GERO 407-3 Nutrition and Aging†
KIN 140-3 Contemporary Health Issues*†
KIN 142-3 Introduction to Kinesiology*†
KIN 143-3 Exercise Management*†
KIN 303-3 Kinanthropometry†
KIN 312-3 Nutrition in Fitness and Sport*†
KIN 342-3 Active Health*†
KIN 375-3 Human Growth and Development*†
KIN 430-3 Human Energy Metabolism†
KIN 431-3 Environmental Carcinogenesis†
KIN 461-3 Physiological Aspects of Aging*†
KIN 491-3 Current Topics in Nutrition*†
KIN 492-3 Contemporary Health Issues*†

*courses available by distance education†courses which have additional prerequisites

Students must have a minimum 2.00 GPA calculated on all required courses. The certificate is normally completed within five years of admission to the certificate program. Credit hours applied to one certificate may not be applied to another certificate or diploma.

Certificate in Health and Fitness Studies
This program provides adults with a co-ordinated program of university study on a full or part time basis in the areas of health, fitness and nutrition, and provides basic knowledge in the functions of the healthy human body at rest and during physical exertion. The program is useful to those supervising training and/or fitness programs, to sport coaches, and to the general public.

Admission is governed by the University admissions regulations. See “British Columbia and Yukon Applicants” on page 21. After being admitted to Simon Fraser University, submission of a completed program approval form to the kinesiology undergraduate advisor is required for formal acceptance in the program.

Requirements
There is a maximum number of allowable transferable credit hours that count toward the certificate from any other institution, including the Open Learning Agency. See "Residency Requirements" on page 109.

Students must complete one of KIN 105-3 Fundamentals of Human Structure and Function* or KIN 205-3 Introduction to Human Physiology, KIN 208-3 Introduction to Physiological Systems and all of KIN 110-3 Current Topics in Nutrition* and KIN 140-3 Contemporary Health Issues*.

Post Baccalaureate Diploma in Kinesiology
This program is normally available for students who have completed a degree other than kinesiology. For further information about the program’s general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Requirements
Successful completion of an approved program comprised of 30 credit hours of upper division or graduate level courses, including the following courses is required.

KIN 304-3 Inquiry and Measurement in Kinesiology
KIN 305-3 Human Physiology I
KIN 306-3 Human Physiology II
KIN 326-4 Functional Anatomy

A minimum 2.5 grade point average is required for courses that are applied toward the diploma. Courses must be selected from an approved listing in consultation with a program advisor. Students interested in this program normally hold a BSc or equivalent. Students are responsible for satisfying the necessary prerequisites.

Co-operative Education Program
Co-operative education combines work experience with academic studies. Students spend alternate semesters on campus and in paid, study-related jobs. Co-op programs are available in kinesiology and biomedical sciences.

Arrangements for work experiences are made through the school’s co-op co-ordinator and the University’s Office of Co-operative Education. For further details, see “Co-operative Education” on page 237.
TechOne Program

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7412 Tel, 778.782.7478 Fax, www.sfu.ca/techone

Program Director
E. J. Fee BA, MA, PhD (Br Col)

Advisor
Ms. A. Stewart BA (S Fraser), 2566 Central City, 778.782.7435 Tel, 778.782.7478 Fax techone_advising@sfu.ca

TechOne is an innovative and challenging first year cohort program offered by the Faculty of Applied Sciences at Simon Fraser University Surrey. TechOne offers a broad foundation and introduction to university for students who are curious about how technology, design and people influence one another. TechOne specifically prepares students for second year studies in business, communication, computing science, engineering science, and interactive arts and technology; however, students interested in any program at Simon Fraser University may choose TechOne as their first year of studies.

TechOne is run as an interdisciplinary cohort program which means all students take their courses in smaller groups together with a set of other first year students. Access to all TechOne cores courses is guaranteed.

First Term Core

The first term of TechOne consists of two or more courses selected from the following set of three, plus electives, which may be chosen with a view to the student’s intended subsequent course of study.

CMPT 120-3 Introduction to Computing Science and Programming 1
TECH 114-3 Technology in Everyday Contexts
TECH 106-3 Spatial Thinking and Communicating

1 Students who already have a substantial background in computing should take CMPT 126 in place of CMPT 120.

Second Term Core

The second term of TechOne consists of two or more courses selected from the following set of three, plus electives, which may be chosen with a view to the student’s intended subsequent course of study.

MACM 101-3 Discrete Mathematics I
TECH 101W-3 Communication, Teamwork and Collaborative Process
TECH 124 Design Thinking (or a discipline-specific project course2)

2 The choice of a design/project course may be determined by the student’s intended program major. ENSC 182 is required for mechatronics students; CMPT 150 for computing science students.

TechOne Elective Requirements

In addition to core requirements, students choose electives that will help complete the lower division requirements of their program major. If students have not yet chosen a program major, a set of qualifying electives will be recommended. Students choose the number of electives they complete in any term and may take electives at any campus.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. The TECH courses are designed to help with completion of these general graduate requirements. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

After TechOne

Some students enter TechOne having already been admitted to a degree program. Other students will wait until TechOne completion to apply for degree program admission. Either way, TechOne students will bring an understanding of how technology and people interact, as well as a toolkit of critical thinking and communication skills to their second year studies. TechOne will specifically help to prepare students who are interested in degree programs in business, communication, computing science, engineering, or interactive arts and technology. These programs may be subject to enrolment limitations, with competitive entry standards based on academic performance.
Academic Advice
Each Faculty of Arts and Social Sciences department provides an advisory service for assisting students to choose courses to satisfy degree requirements. Students who have made a formal program declaration should avail themselves of these services. Those who have not, but have completed 60 credit hours, will be advised by the faculty advisor in the Office of the Dean. Where specified, students should also consult the Office of the Dean of Arts and Social Sciences regarding regulations.

Students in all programs leading to Faculty of Arts and Social Sciences bachelor's degrees must consult an advisor:
- prior to first enrollment at the University, and
- during that term when they are taking their 45th credit hour, and
- during that term when they are taking their 90th credit hour

Students in other programs such as certificate and post baccalaureate diploma programs are governed by the requirements of the specific programs.

Faculty Admission Regulations
Students currently enrolled in other Simon Fraser University Faculties must have a 2.0 grade point average, or greater, to enter the Faculty of Arts and Social Sciences (FASS).
If a student withdraws, or is required to withdraw, and if the student is, at that time, in the FASS, and if that student is subsequently re-admitted to the University, s/he will be permitted to re-enter FASS, even though their Simon Fraser University cumulative grade point average is less than 2.00.

Students in Science One and Tech One may not transfer into the FASS until the end of the second term following their admission to the Science One or Tech One programs.

Faculty Course Regulations
Students may count any Simon Fraser University course for which credit is received toward the bachelor of arts degree with the exceptions of EDUC 401, 402, 405 and 406; ATHL 201, 202, 203 and 204. Only the first five course duplications will count toward a BA, BFA or BGS. A maximum of five will count toward all programs taken in the Faculty of Arts and Social Sciences at Simon Fraser University. See “Limits on Duplication of Courses” on page 31 for further information.

Co-operative Education Program
6046 Academic Quadrangle, 778.782.3041/5/751/776/5839 Tel, www.sfu.ca/coop

Co-ordinators
P. Johnston BA (S Fraser)
E. Lewis BA (S Fraser)
C. Wakelin BA (S Fraser)

This program is available for students who wish to acquire practical experience in conjunction with their academic programs. The student normally spends alternate terms on campus and in paid, study-related jobs.

Refer also to Archaeology, Cognitive Science, Criminology, Economics, English, First Nations, French, Geography, History, Humanities, Latin American Development Studies, Linguistics, Political Science, Psychology, Sociology/Anthropology, and Women's Studies as well as the Co-operative Education sections of this Calendar.

Students who are completing programs in departments that do not list co-operative education practicum courses can enroll in LBLR 101, 201, 301, 401 and 402.

Major Program
The following are recommended prior to entry in the co-op education program: one course from either set 2 or set 8 as listed under the Certificate in Liberal Arts (page 132), and at least 12 hours of required lower division courses in the major program.

Students Without Majors (BGS/BEd)
To be admitted, students must have completed a minimum of 30 credit hours with a minimum CGPA of 2.75. Prior to admission, all students must complete either ENGL 199-3 Introduction to University Writing or any two 100 division ENGL courses.

A quantitative research course in your area of interest is strongly recommended. Computer literacy is a requirement. For further information, contact one of the Faculty of Arts and Social Sciences co-operative education co-ordinators (see “Co-operative Education” on page 237 for a list of Faculty of Arts and Social Sciences co-op advisors).

Requirements
To be admitted, students must have completed a minimum of 30 credit hours with a minimum CGPA of 2.75. Prior to admission, all students must complete ENGL 199-3 University Writing (or any two 100 division English courses) PHIL 001-3 Critical Thinking

A quantitative research course in your area of interest is strongly recommended. Computer literacy is a requirement. See the Faculty of Arts and Social Sciences co-op co-ordinators for further information.

Transfer Students
Transfer students should contact the co-ordinators in the first week of their first Simon Fraser University term. College transfer students who participated in co-op programs elsewhere may be credited with the terms already taken. Students contemplating transfer to the Simon Fraser University Faculty of Arts and Social Sciences co-op program should contact an admissions advisor in Student Services early.

Bachelor of Arts Degree
Students can meet the bachelor of arts requirements in one of five ways: through a major program; or through a joint major program; or through two extended minors; or through an honors program; or through a joint honors program. In addition to the degree requirements set out below, students may also fulfill the requirements for an extended minor or a minor as noted under the Options headings.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. Please note that the Faculty of Arts and

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Social Sciences bachelor of arts and bachelor of fine arts students must complete 12 additional breadth credit hours rather than the normal University regulation of six additional breadth credit hours. Additional breadth credit hours must be from outside the student's major program and may or may not be B-designated (B-Hum, B-Soc, B-Sci courses).

**Major Program**
To concentrate in a subject area, students may take a major consisting of at least 30 upper division credit hours in that subject area. A major provides a strong subject background and is preparation for a range of occupations, or for further study following graduation. The major program is the most common option chosen by students pursuing a bachelor of arts degree.

At least 120 credit hours are required including:
- at least 65 credit hours in subjects
- at least 45 upper division credit hours, including at least 30 upper division credit hours in an arts major program. No more than 15 upper division credit hours transferred from another institution may be used toward the requirements for a major.
- lower division requirements for at least one arts major
- satisfaction of the Faculty of Arts and Social Sciences writing, quantitative, and breadth requirements (see above)

**Note:** A department may designate up to eight credit hours of program-related upper division courses offered by other departments as being acceptable in fulfilling part of the required hours in a major program.

**Joint Major Program**
A joint major is a combination of two subject areas. Students must complete at least 20 upper division credit hours in each of the two joint major subject areas. Students are advised to check individual department listings for possible additional requirements.

A joint major provides preparation for a range of occupations, or for further study following graduation.

At least 120 credit hours are required which include:
- at least 65 credit hours in Faculty of Arts and Social Sciences subjects
- at least 45 credit hours in upper division courses which must include at least 20 upper division credit hours in each of the two joint major subjects. No more than 15 upper division credit hours transferred from another institution can be used toward this requirement.
- lower division prerequisites for both joint major programs
- satisfaction of the Faculty of Arts and Social Sciences writing, quantitative and breadth requirements (see above)

**Extended Minor Program**
Students wishing to prepare themselves in two subject areas, but not desiring to undertake a major or a joint major program, may complete an extended minor program consisting of two extended minors in the bachelor of arts degree.

An extended minor consists of the lower division requirements for a major, plus the upper division requirements for a minor. At least seven upper division credit hours counted toward this requirement must be taken at Simon Fraser University.

At least 120 credit hours are required which include:
- at least 65 credit hours in Arts subjects
- at least 45 upper division credit hours, including 30 in two extended minor programs (at least 15 upper division credit hours in each of two extended minor programs). No more than 8 upper division credit hours transferred from another institution may count toward an extended minor.
- lower division requirements for at least two extended minor programs. The requirements for an extended minor program are the same as lower division requirements for a major program.
- satisfaction of the Faculty of Arts and Social Sciences writing, quantitative and breadth requirements (see above).

**Note:** There are programs in the School for the Contemporary Arts which have individually defined extended minors but which do not have majors. Students declaring this degree option must get approval from the advisors in their two extended minor programs as well as the approval of the degree advisor.

**Minor Program**
All Faculty of Arts and Social Sciences minor programs require at least 15 upper division credit hours within a single discipline unless otherwise specified in the Calendar. At least seven upper division credit hours counted towards this requirement must be taken at Simon Fraser University.

**Honors Program**
Students must complete at least 132 credit hours which include:
- at least 65 credit hours in Arts subjects
- at least 60 credit hours in upper division courses which must include at least 50 credit hours in upper division courses in an Arts honors program. No more than 15 upper division credit hours transferred from another institution can be used toward this requirement.
- lower division prerequisites for at least one Arts honors program
- satisfaction of the Faculty of Arts and Social Sciences writing, quantitative and breadth requirements (see above)

**Note:** A department may designate up to 12 credit hours of program related upper division courses offered by other departments as being acceptable in fulfilling part of the required upper division credit hours in the honors program.

**Joint Honors Program**
Students must complete at least 132 credit hours which include:
- at least 65 credit hours in Arts subjects
- at least 60 upper division credit hours which must include at least 28 in upper division courses in one of the two honors subjects. No more than 15 upper division credit hours transferred from another institution can be used toward this requirement.
- lower division prerequisites for both honors programs
- satisfaction of the Faculty of Arts and Social Sciences writing, quantitative and breadth requirements (see above)
- satisfactory completion of an honors essay jointly supervised by and acceptable to both honors departments

Students must maintain a 3.0 GPA in upper division courses in each subject of the joint honors program.

**Program Declaration**
Prior to or upon enrolling for the term in which the 61st credit is taken, students must formally declare and be accepted into a major program or two extended minors and may, subject to the regulations below, apply for an honors program. The formal declaration establishes the exact major, or extended minor requirements for graduation as they appear in the Calendar in effect at the time of declaration.

Students are urged to keep a copy of this Calendar, known as the Graduating Calendar, for reference. Degree programs may be changed any time prior to graduation. A new formal declaration must be approved by the new program department and the Dean of Arts and Social Sciences Office if a faculty change is involved. The Calendar then in effect becomes the new Graduating Calendar, and the requirements it specifies for the program must be fulfilled.

**Honors Program**
Program acceptance is contingent upon satisfying the entrance requirements of the department concerned. Applicants normally have a 3.0 GPA in subject(s) of the honors field. When admission is granted, the student then enrolls as an honors student. To continue, this 3.0 GPA must be maintained. Failure to do so will place the student in the corresponding general degree program. Students will still be subject to the regulations of the original graduating Calendar. If a student is subsequently reinstated into the honors program, the graduating Calendar is that which was in effect at the time of the original program acceptance.

**Graduation GPA Requirements**
Please see “Grade Point Averages Needed for Graduation” on page 35 for current GPA requirements for graduation.

Individual departments/schools may have additional GPA requirements for graduation. Please check individual department/school Calendar listings for further information.

Please note that the minimum GPA requirements for graduation differed during the following time periods: September 1965 to August 1991; September 1991 to August 2003. Please see the appropriate Calendar(s) for information about GPA requirements during these time periods.

*Calendar in effect at the time of entry to Simon Fraser University and the Calendar that was in effect at the time of approval to credential and/or program.

**Bachelor of General Studies Degree**
This non-specialist degree program, administered within the Faculty of Arts and Social Sciences, is designed for students whose educational goals are not met by other, more structured, undergraduate degree programs. Students may complete one or more minors or extended minors (but no major), in any academic area(s) as part of the BGS degree. Students considering this program are strongly urged to consult the advisor before declaring the BGS as their degree.

**Requirements**
Students must complete a minimum of 120 credit hours, including at least 45 upper division credit hours. The graduation minimum is a graduation GPA of 2.0 and a cumulative GPA of 2.0 calculated on all upper division courses taken, except duplicate courses.

University regulations governing the duplication of courses (see “Limits on Duplication of Courses” on page 31) are rigorously applied in the Faculty of Arts and Social Sciences.

With the exception of EDUC 401, 402, 405 and 406; ATHL 201, 202, 203 and 204, courses taken from any faculty may be used to satisfy the degree requirements, but admission to courses is subject to the prerequisite requirements of the various departments.
Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. For the University’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 7.

Graduation GPA Requirements

Please see “Grade Point Averages Needed for Graduation” on page 35 for current GPA requirements for graduation.

Individual departments/schools may have additional GPA requirements for graduation. Please check individual department/school Calendar listings for further information.

Please note that the minimum GPA requirements for graduation differed during the following time periods:

- September 1985 to August 1991
- September 1991 to August 2003

“Calendar in effect at the time of entry to Simon Fraser University and the Calendar that was in effect at the time of approval to credential and/or program.

Transfer

Special transfer regulations for the BGS degree provide broadened opportunities for degree completion for students who may have difficulty in availing themselves of courses.

In accordance with normal University regulations, 60 credit hours of transfer and/or course challenge credit may count toward a Simon Fraser University degree. In addition, a further 30 credit hours of transferable credit from a degree granting institution recognized and accepted by Simon Fraser University may be credited toward the BGS degree, provided that the student also completes at least 30 of the required 45 upper division credit hours in Simon Fraser University courses.

Even within these special transfer regulations, students must complete a total of 45 upper division credit hours. All such programs will require a minimum of 60 credit hours. Admission criteria, and any other special conditions for each individual integrated studies program will be approved in advance by the Faculty of Arts and Social Sciences curriculum committee.

Post Baccalaureate Diploma Programs

The Faculty of Arts and Social Sciences offers disciplinary and interdisciplinary post baccalaureate diplomas. See “Post Baccalaureate Diploma Program” on page 7.

Certificate Programs

The certificate programs below are administered by the Faculty of Arts and Social Sciences.

Credit hours applied toward a certificate may not be applied toward any other Simon Fraser University certificate or diploma, but may also be applied toward major program or minor program requirements or toward a bachelor's degree under the normal regulations governing those programs.

Certificate in Explorations in the Arts and Social Sciences

Advisor

Mr. L. Thong BA (S Fraser), Galleria 5, Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7593, leonard@sfu.ca

This interdisciplinary program provides a broad, coherent and stimulating introduction to university studies. Students explore ideas and issues in courses that introduce arts and social science perspectives to first year students. Students will learn to question, research and think independently and will be encouraged to develop communication and reasoning skills required to debate central ideas that shape society and community.

This cohort program, in which students take core courses together as a group, is an excellent choice for first year students as they make the transition from high school to university.

Core courses are offered in fall and spring terms at Simon Fraser University Surrey during which students can also complete electives. Core courses are the foundation for this certificate which is awarded upon completion of the following requirements.

The certificate is comprised of nine required and elective courses for a total of 27 credit hours.

Students who fail a core course must make a written request for permission to continue in the program.

Beyond First Year Cohort

Students are encouraged to look at major or minor program requirements. Programs have varying requirements in the lower division, and students can prevent unnecessary education delays by planning ahead. Programs may also be subject to enrolment limitations with competitive entry standards based on academic performance. Students who are unable to gain admission to such programs should consult the program advisor with respect to other options.

Certificate in Liberal Arts

Advisor

Ms. S. Cowan, 6170 Academic Quadrangle, 778.782.5426

This program provides broad exposure to areas of knowledge and methods of inquiry that are essential to a liberal education. It is for those who desire a breadth of learning program. It may be taken in conjunction with a degree program, or by students who are not seeking a degree.

The certificate requires ten courses comprising at least 30 credit hours from a designated courses list. These courses, which include both lower division and some upper division courses, have been carefully chosen for their suitability in providing accessible and valuable material for the generally interested student.

Course Sets

Applicable certificate courses are listed in 12 sets. Each set includes courses from a variety of University departments. For a certificate student to be acquainted with various fields of inquiry and approaches to knowledge, the ten required courses must be distributed across these sets as described below. See “Distribution Requirements” on page 133. A brief description of the kinds of courses in each set are as follows.

Verbal Skills

These courses enhance the mastery of some basic tools of verbal reasoning and expression. They include courses on writing and critical thinking, and introductory language courses. Students who take an introductory course in a language other than English are strongly urged to complete a second course in that language as part of their certificate program.

The Study of Theory and Theory Building

These courses introduce the nature of explanatory systems in various fields of inquiry. They include various discipline courses that focus on dynamics of theory construction and historical evolution of theory within that discipline. Courses in this set provide appreciation for ways in which the processes of...
reasoning, argument, observation and analysis are included within the development of disciplines.

The Analysis of Contemporary Issues
These courses examine some current social problems and controversies, emphasizing the application of appropriate conceptual and investigative methods to areas of public concern. Courses in this set will give students some appreciation for the ways in which careful reasoning and disciplinary knowledge can be applied in clarifying the discussion of public issues.

The Study of Literature
These courses introduce important literary works and to ways of understanding literary expression. They include courses on literature written in English and in other languages, as well as literature in translation.

Fine and Performing Arts
These courses familiarize students with non-literary modes of artistic expression and with important works of art including history and criticism of arts forms courses.

Studies in Culture and Civilization
These courses introduce a wide study of cultures and civilizations. They include courses that consider the development of human values, and that take comparative and interdisciplinary approaches to culture, as well as historical studies that include substantial attention to cultural themes.

The Study of Period and Place
These courses study developments in human society with emphasis on historical or regional particularity, and introduce methods associated with such study. They include courses that focus on regions and regionalism, as well as on specific historical periods.

Foundations of Social Science
These courses introduce fundamental concepts and investigation methods in social science disciplines.

Social and Behavioral Analysis
These courses articulate an approach to social structures or to individual or group behavior and apply that perspective to an area of social investigation.

Natural Science
These courses introduce methods that are basic to natural sciences and to at least one specific science.

The Impact of Science and Technology
These courses investigate the social impact of developments in science, technology, and computational and quantitative methods.

Quantitative Skills
These courses enhance the mastery of mathematical skills and tools for quantitative reasoning. They include basic level mathematics and computing, and statistics oriented research methods courses.

Distribution Requirements
Eight of the required ten courses must be distributed among the above sets as follows. (See course lists for applicable courses.)

www.sfu.ca/arts/clacourse.htm. Lists include courses approved by senate for program inclusion and occasional courses approved as certificate courses only for a single offering. Some have prerequisites. In most instances, the specific prerequisites may also be completed within the certificate program. Consult the Calendar and course outlines to understand courses and prerequisites. Advice is available through department advisors, the Dean of Arts and Social Sciences office and Student Services Academic Advising.

Transfer Credit
A maximum of 15 transfer credit hours is permitted towards the Certificate in Liberal Arts. Normally, only credit assigned as directly equivalent to a course regularly listed within the program may be transferred.

Certificate for Senior Citizens
This program provides seniors with opportunities to participate in University life, to undertake study relevant to life goals, and to gain recognition for academic achievement. Each fall and spring the University offers courses for adults aged 60 and over at Simon Fraser University Vancouver. Courses may also be selected from regular University offerings.

Admission Requirements
Admission regulations apply, most as either secondary school graduates or under the terms of mature student entry (see "Admission and Readmission on page 17). Also, applicants shall consult a program advisor concerning the demands of the program and their educational objectives.

Program Requirements
Successful completion, after age 60, of 30 credit hours, approved by the program co-ordinator or other official appointed by the Dean of Arts and Social Sciences is required.

Note: Normally all courses for the certificate must be taken at Simon Fraser and not more than six credit hours of approved transfer credit for university/college work may be applied towards certificate requirements.

Department of Archaeology
9635 Education Building, 778.782.3135 Tel, 778.782.5666 Fax, www.sfu.ca/archaeology

Chair
D.V. Burley BA, MA (New Br), PhD (S Fraser)

Professors Emeriti
R.L. Carlson BA, MA (Wash), PhD (Ariz)

Associate Professors
R. Shutler, Jr. BA, MA, PhD (Tor)

Professors
D.V. Burley BA, MA (New Br), PhD (S Fraser)

A.C. D’Andrea BA, MA (Calif), PhD (S Fraser)

J.C. Driver MA (Camb), PhD (Calif)

J.R. Welch AB (Hamilton), MA, PhD (Arizona)*D.

D. Yang BSc (Lanzhou), MSc (Chin Acad Sc),

PhD (McM)

Assistant Professors
A.G. Ross BA, MA (Wash), PhD (Calif)**

E.C. Yellowhorn BA, BSc (Calg), MA (S Fraser),

PhD (McG)

Lecturer
R.J. Muir BA (S Fraser), MA (Trent), PhD (S Fraser)

Adjunct Professors
J.P. Delgado BA (San Francisco), MA (E Carolina),

PhD (S Fraser)

R.A. Lazebny BA, MA (S Fraser), PhD (McM)

T.A.M. McMillan BA (Sask), MA (Br Col), PhD (S Fraser)

M.C. Wilson BA (Calg), MA (Wyoming), PhD (Calg)

Associate Members
J.J. Clague, Earth Sciences

D.J. Hunteley, Physics

R.W. Mathewes, Biological Sciences

Advisor
Ms. C. Papalianni, 9633A Education Building, 778.782.4687

*joint appointment with resource and environmental management

**joint appointment with First Nations studies

The department offers various programs leading to the BA degree. Students must meet requirements for the degree (described in the Faculty of Arts and Social Sciences section), should take courses in some complementary disciplines, and should seek departmental advice early in their university careers.

Recommended Courses
The following courses are recommended.

SA 101 (recommended for majors and honors)

SA 203 (prerequisite for ARCH 376 which is recommended for majors and required for honors)

Upper Division ARCH Course Groups
Upper division archaeology courses are divided into the following groups.

Group I – Core Program

ARCH 372-5 Material Culture Analysis

ARCH 373-5 Human Osteology

ARCH 376-5 Quantitative Methods in Archaeology

ARCH 471-5 Archaeological Theory

Group II – Laboratory Courses

ARCH 335-5 Special Laboratory Topics in Archaeology

ARCH 340-5 Zoarchaeology

ARCH 348-5 Archaeological Conservation

ARCH 349-5 Management of Archaeological Collections

ARCH 377-5 Historical Archaeology

ARCH 385-5 Paleoanthropology

ARCH 390-5 Archaeobotany

ARCH 432-5 Advanced Physical Anthropology

ARCH 442-5 Forensic Anthropology

ARCH 485-5 Lithic Technology

Group III – Regional Courses

ARCH 321-3 Archaeology of Britain

ARCH 330-3 Prehistory of Latin America

ARCH 360-5 Native Cultures of North America

ARCH 370-3 Western Pacific Prehistory

ARCH 378-3 Pacific Northwest North America

ARCH 379-3 Archaeology of the American Southwest

Group IV – Topical Courses

ARCH 301-3 Prehistoric and Indigenous Art

ARCH 302-3 Art of Ancient Civilizations

ARCH 311-5 Archaeological Dating

ARCH 336-3 Special Topics in Prehistoric and Indigenous Art

ARCH 344-3 Primate Behavior

ARCH 365-3 Ecological Archaeology

Simon Fraser University 2007 • 2008 Calendar
ARCH 386-3 Archaeological Resource Management
ARCH 438-5 Gearchaeology

Special topics and/or directed studies courses may substitute for group II, III or IV courses, provided the content of the special topics and/or directed studies course suggests a suitable substitution, and written department consent is obtained prior to enrollment.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty's requirements, see “Writing, Quantitative, and Breadth Requirements” on page 7.

Major Program

Lower Division Requirements
ARCH 131-3 Human Origins
ARCH 201-3 Introduction to Archaeology
ARCH 272-3 Archaeology of the Old World
ARCH 273-3 Archaeology of the New World

Upper Division Requirements

Students must complete at least 30 upper division archaeology credit hours which must include
- at least three group I courses (ARCH 372, 471, and either 373 or 376). It is strongly recommended that majors students, students interested in physical anthropology, and those contemplating graduate study, complete all four group I courses.
- at least one group II course
- at least one group III course
- at least two group IV courses

If students take both ARCH 373 and 376, they may use both as group I requirements, or use ARCH 373 as a group II requirement, or ARCH 376 as a group IV requirement.

Honors Program

Archaeology majors who wish honors program admission must have a minimum 3.0 CGPA and department permission. To remain in the program, students must maintain that CGPA and successfully complete 132 credit hours with 50 of those in upper division archaeology. As well as meeting group II, III, and IV requirements for the major, honors students complete all four group I courses, ARCH 498 and 499. See “Bachelor of Arts Degree” on page 130.

Minor Program

Lower Division Requirements
ARCH 131-3 Human Origins
ARCH 201-3 Introduction to Archaeology
and one of
ARCH 272-3 Archaeology of the Old World
ARCH 273-3 Archaeology of the New World

Upper Division Requirements

At least 16 hours of upper division archaeology are required including at least one course from each of groups II, III, and IV listed above.

Extended Minor Program

This program consists of the lower division requirements for a major and the upper division requirements for an archaeology minor. Programs must be approved by the department advisor.

Languages Other Than English

Those contemplating graduate work are advised to acquire a reading knowledge of at least one language other than English.

Joint Major in Archaeology and Anthropology

Advisors
Ms. G. Wild, Department of Archaeology, 9633A Education Building, 778.782.4687
Ms. K. Payne, Department of Sociology and Anthropology, 5056 Academic Quadrangle, 778.782.3726

This program explores inter-relationships between anthropology and archaeology. Students should plan their program in consultation with both advisors.

Lower Division Anthropology Requirements

Students must complete the following courses.
SA 101-4 Introduction to Anthropology
SA 201-4 Anthropology of Contemporary Life
SA 255-4 Introduction to Social Research

plus four additional 200 division credit hours chosen from anthropology (A) or sociology/anthropology (SA) courses.

Strongly Recommended
SA 286-4 Aboriginal Peoples and British Columbia: Introduction

Lower Division Archaeology Requirements

Students must complete the following courses.
ARCH 131-3 Human Origins
ARCH 201-3 Introduction to Archaeology
ARCH 272-3 Archaeology of the Old World
ARCH 273-3 Archaeology of the New World

Upper Division Anthropology Requirements

At least 20 credit hours of upper division anthropology are required including the following.
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods
SA 386-4 The Ethnography of Politics
SA 402-4 The Practice of Anthropology

and one other upper division anthropology course.

Highly Recommended
SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar (A)

Upper Division Archaeology Requirements

Students are required to complete at least 23 credit hours of upper division archaeology including one of
ARCH 301-3 Prehistoric and Indigenous Art
ARCH 386-3 Archaeological Resource Management

and all of
ARCH 360-5 Native Cultures of North America
ARCH 372-5 Material Culture Analysis
ARCH 471-5 Archaeological Theory

plus one group II archaeology course.

ARCH 378 and 385 are strongly recommended.

Joint Major in Archaeology and First Nations Studies

See “Joint Major in Archaeology and First Nations Studies” on page 155 for program information.

Joint Major in Archaeology and Latin American Development Studies

See “Joint Major Programs” on page 170.

Co-operative Education Program

This program offers work experience in archaeology and physical anthropology and entails planned terms of study and employment (term practicums) in an area of the student’s choice.

Requirements

To be admitted, a major must have been declared and the student must have at least 45 credit hours, with a minimum CGPA of 3.0. The following courses (or equivalent as approved by the department co-op education co-ordinator) are recommended.

both
ARCH 131-3 Human Origins
ARCH 201-3 Introduction to Archaeology

one of
ARCH 272-3 Archaeology of the Old World
ARCH 273-3 Archaeology of the New World

three of
ARCH 372-5 Material Culture Analysis
ARCH 373-5 Human Osteology
ARCH 376-5 Quantitative Methods in Archaeology
ARCH 377-5 Historical Archaeology
ARCH 386-3 Archaeological Resource Management
ARCH 442-5 Forensic Anthropology

Contact the co-op co-ordinator, undergraduate chair, and/or departmental assistant at least one term before the first work term to participate. See “Co-operative Education” on page 237 regarding job competition, student employer responsibilities, student fees, pay rates and evaluation. During work terms, co-op students are formally enrolled in a job practicum course and are assessed a fee.

Program continues require a minimum 3.0 CGPA in all courses. College transfer students must have at least 15 Simon Fraser University credit hours to be eligible for co-op admission. Transfer students who participated in co-operative education programs elsewhere may be credited with the term(s) already taken pending evaluation and approval of the Simon Fraser University co-op program.

Asia-Canada Program

5115 Academic Quadrangle, 778.782.3689 Tel, 778.782.4504 Fax, www.sfu.ca/AsiaCanada

Director
T. Kawasaki LLB (Doshisha), MA (Tor), PhD (Prin)*

Advisory Committee
L. Clossey, History
P. Crowe, Humanities
S. Duguid, Humanities
J. Eylerth, History
K. Froschauer, Canadian Studies
A. Geiger, History
H. Leung, Women’s Studies
C. Han, Linguistics
M. Howard, International Studies
J. Matsumura, History
K. McAllister, Communication
Z. McRobbie, Linguistics
P. Meyer, Political Science
R. Miki, English
B. Ng, Linguistics
N. Omar, Linguistics
J. W. Walls, Humanities
Y. Wang, Linguistics
D. Yang, Archaeology
Y. Zhao, Communication

*joint appointment with humanities, political science

Advisor
Ms. C. Prisland, 5114 Academic Quadrangle, 778.782.4094, prisland@sfu.ca

The Asia-Canada Program investigates connections between contemporary Canadian society and culture, and that of a variety of Asian countries. Part of the program is a study of one or more Asian languages. This extended minor’s goal is to introduce students to the economic, social and cultural connections between Asian countries and Canada. Students can apply the Asia-Canada extended minor along with another extended minor towards a Bachelor of Arts degree, or with a major in any bachelor’s degree, or use it towards a Bachelor of General Studies degree.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 132.

Extended Minor Program

Lower Division Requirements

Students must complete 18 credit hours including
ASC 101-3 Introduction to Asia-Canada Studies I
ASC 202-3 Introduction to Asia-Canada Studies II
plus one of
ASC 200-3 Introduction to Chinese Culture
ASC 201-3 Introduction to Japanese Culture and History
ASC 202-3 Studies in Asian Cultures
plus one of
CNS 160-3 The Social Background of Canada
CNS 210-3 Foundations of Canadian Culture
HIST 102-3 Canada Since Confederation
HIST 204-3 The Social History of Canada
SA 100-4 Perspectives on Canadian Society
and six credit hours of Chinese or Japanese or another Asian language (approved by the advisor). Students who can demonstrate prior knowledge and proficiency that is equivalent to a 100 division Asian language course are encouraged to choose another Asian language, or they can substitute the six language credit hours with further lower division Asia-Canada courses. Students eligible for these options must have their language level assessed and receive prior approval from the director and advisor.

Note: ASC 205 taken in the China Field School cannot be counted in lieu of ASC 200/201/202.

However, students can count CHIN 185, taken in the field school, for the language requirement.

Upper Division Requirements

Students must complete 15 credit hours including at least one of
ASC 300-3 Asians and North Americans in Public Discourse
ASC 301-3 Asia-Canada Identities: Experiences and Perspectives
and at least one upper division Asia-Canada course.

Note: If both ASC 300 and 301 are taken, students can count one course toward fulfilling the remaining upper division requirements.

To satisfy the remaining nine required credit hours, students must complete courses from the following. With prior permission from the director, students may count other Asia-Canada related courses at the upper division which do not appear on this list. Consult with the program advisor.

ASC 302-3 Selected Topics in Chinese Studies
ASC 303-3 Selected Topics in Japanese Studies
ASC 400-3 Selected Topics in Asia-Canada Studies
ASC 401-3 Directed Studies
BUS 431-3 Business with East Asian Countries
ENGL 394-4 World Literature in English II
HIST 366-4 Social History of China Since 1800
HIST 471-4 Women in Modern Japanese History
HIST 479-4 Change, Conflict, and Resistance in Twentieth Century China
HUM 340-4 Great Cities in Their Time*
HUM 350-4 Great Figures in the Humanistic Tradition*
HUM 383-4 Selected Topics in the Humanities II*
POL 335-4 Government and Politics: People’s Republic of China I
POL 336-4 Government and Politics: People’s Republic of China II
POL 381-4 Politics and Government of Japan I
POL 430-4 Government and Politics: Selected Asian Nations
*when the topic is Asia-Canada related. Consult the program advisor.

Note: Students are responsible for meeting the prerequisites for the upper division courses they are applying to the extended minor.

Certificate in Chinese Studies

This program offers courses related to the study of China. Students receive an introduction to Chinese language and take other related courses. Part of the program involves courses (ASC 205 and six credit hours of language) that can be taken at a university in China during the Simon Fraser University China field school in the summer. The field school requires extra travel and living expenditures. It is, however, not a requirement for the certificate program.

The program is offered by the Asia-Canada Program/Department of Humanities and is administered by the program advisory committee appointed by the Dean of Arts and Social Sciences. Those who plan to do part of their program in China should contact the advisor at least two terms before the field school.

Admission Requirements

There are no special admission requirements. See the Asia-Canada advisor for certificate program approval. China Field School students must apply to the SFU International office. Acceptance into this part will normally require that the student have completed 30 credit hours and be in good academic standing.

Program Requirements

Students complete 24 credit hours, of which 12 are earned by completing four required core courses. The remaining courses are selected from the list of electives below.

Core (12 credit hours)

Students must take one of
ASC 200-3 Introduction to Chinese Culture
ASC 205-3 Field Studies in Chinese Culture and all of
CHIN 100-3 Mandarin Chinese I*
CHIN 101-3 Mandarin Chinese II*
and one of
HIST 254-3 China to 1800
HIST 255-3 China Since 1800
*Students who take CHIN 185-6 (Intensive Mandarin Chinese in the China Field School) can apply the credit towards either the core or elective requirements or a combination thereof for complete or partial replacement of CHIN 100/101/200/201. Students who take CHIN 151 and/or 152 may apply the credit to either the elective or required courses for the certificate for complete or partial replacement of CHIN 100/101/200/201.

Elective (12 credit hours)

ASC 202-3 Studies in Asian Cultures*
ASC 302-3 Selected Topics in Chinese Studies
ASC 400-3 Selected Topics in Asia-Canada Studies
BUS 431-3 Business with East Asian Countries*
CHIN 200-3 Mandarin Chinese III
CHIN 201-3 Mandarin Chinese IV
HIST 254-3 China to 1800 (or HIST 255)
HIST 256-3 The People’s Republic of China
HIST 366-4 Social History of China Since 1800
HIST 479-4 Change, Conflict, and Resistance in Twentieth Century China
HUM 203-3 Great Texts in the Humanities III*
HUM 330-4 Religion in Context*
HUM 383-4 Selected Topics in the Humanities II*
POL 335-4 Government and Politics: People’s Republic of China II
POL 336-3 Government and Politics: People’s Republic of China I
SA 275-4 Asian Societies*
*when the topic is China related. Consult the program advisor.

With prior permission from the director, students may count other China-related courses which do not appear on this list. Consult with the program advisor.

Centre for Canadian Studies

6067 Academic Quadrangle, 778.782.4293 Tel, 778.782.4786 Fax, www.sfu.ca/cns

Director
(to be announced)

Associated Faculty

Faculty of Applied Sciences

School of Communication

Faculty of Arts and Social Sciences

Department of Archaeology
D.V. Burley, J. Driver, K.R. Fladmack, M.F. Skinner

Centre for Distance Education
K. McManus

School for the Contemporary Arts
C. Browne

School of Criminology

Department of Economics

Department of English
S. Djwa, C. Gerson, R.A. Miki, D. Stouck, P.M. St. Pierre

Department of French
J. Calderon, R. Canac-Marquis, R. Davison, L. Fraggieri, C. Guilbault, M.-E. Lapointe, P. Wrenn, S. Steele

Department of Geography
N.K. Blomley, B.E. Bradshaw, A.M. Gill, M. Hayes, R. Hayter, P.M. Korosich, J.T. Pierce, M. Roseland

Department of History
Students must demonstrate a working knowledge of French which is determined by completing FREN 122, or the former FREN 298, or equivalent, or by passing a placement exam at this level.

**Upper Division Requirements**

one of CNS 490-5 The Canadian Intellectual Tradition CNS 491-3 Technology and Canadian Society At least three other 300-400 division CNS courses must be completed plus 18 additional hours in upper division Canadian studies/Canadian content courses. No more than 12 credit hours of this requirement may be from curriculum of any single department or program other than Canadian studies.

**Distribution Requirements**

To ensure adequate breadth of knowledge, students must complete at least eight required key courses from at least five departments having courses recognized as carrying Canadian studies credit. These courses can be both upper and lower division.

**Honors Program**

For Canadian Studies honors, students take the same lower division courses and meet the same distribution requirements that apply to the Canadian Studies major, and must also complete the following courses.

**Lower Division Requirements**

HIST 101-3 Canada to Confederation POL 221-3 Introduction to Canadian Government POL 222-3 Introduction to Canadian Politics

**Upper Division Requirements**

CNS 490-5 The Canadian Intellectual Tradition CNS 491-3 Technology and Canadian Society CNS 495-5 Canadian Studies Honors Essay At least two other 300-400 division CNS courses must be completed, plus 33 additional upper division credit hours in Canadian studies/Canadian content. No more than 18 hours of this requirement may be from curriculum of any single department or program other than Canadian studies.

Honors students must demonstrate functional bilingual English/French proficiency by completing FREN 221.

See below in the **Joint Honors Program** regarding level of entry and course challenge procedures.

**Minor Program**

Students must complete nine Canadian studies lower division credit hours which must include two of CNS 160-3 The Social Background of Canada CNS 210-3 Foundations of Canadian Culture CNS 280-3 Canadian Political Economy Also, 15 hours of upper division Canadian studies/Canadian content course work are required, one of which must be a CNS 300-400 division course. Students taking the Canadian studies minor with a major, minor or honors in another department or program may not count any Canadian content course being used by that department or program as part of their Canadian studies minor requirement. A working knowledge of French is recommended. Students pursing a Canadian studies minor do not have to satisfy any key course requirements.

**Extended Minor Program**

This program consists of the lower division requirements for a major and the upper division requirements for a minor. Certain other criteria may be set by individual departments. Students must have their program approved by the advisor.

**Joint Major Programs**

Joint majors with the Centre for Canadian Studies are available with the Departments of Archaeology, Criminology, English, Geography, History, Political Science, and Sociology and Anthropology, and with the School of Communication.

With the exception of a joint major in history (see page 136), students must complete all requirements for a Canadian studies major and the other subject. Any lower division course that counts toward the separate requirements for Canadian studies and for the other subject may be counted towards both. Up to 12 upper division credit hours in both Canadian studies and the other subject may be counted toward the upper division credit requirements of both. A joint major in Canadian studies and another subject that also specifies 30 upper division credit hours will therefore require a total of 48 upper division credit hours in the two subjects (30 Canadian studies plus 30 in the other subject minus 12 overlap).

Joint major students are required to complete all the key courses listed for the department in which they are pursuing the other major.

**Joint Major in Criminology and Canadian Studies**

See “Joint Major in Criminology and Canadian Studies” on page 149.

**Joint Major in Canadian Studies and Sociology and/or Anthropology**

There are three joint major combinations of Canadian studies with sociology and anthropology. The total upper division credit hour requirement for this is 58 (30 Canadian studies plus 20 sociology plus 20 anthropology minus 12 overlaps).

**Joint Major in Canadian Studies and History**

Students must complete all requirements for a Canadian Studies major plus 24 upper division credit hours in both Canadian studies and the other subject may be counted towards both. Up to 15 upper division credit hours in both Canadian studies and the other subject may count towards the upper division requirements of both. Joint honors in Canadian studies and another subject that require 50 upper division credit hours will therefore require 65 upper division credit hours in the two subjects (30 CNS plus 50 in the other subject minus 15 overlap). For joint honors with sociology or anthropology, 75 upper division credit hours are required (30 CNS plus 28 sociology plus 28 anthropology plus four additional sociology or anthropology minus 15 overlap with Canadian studies).

**Joint Honors Program**

Students complete all requirements for a Canadian studies major and honors in the other subject. Any lower division course that counts toward the separate Canadian studies requirements and the other subject may be counted towards both. Up to 15 upper division credit hours in both Canadian studies and the other subject may count towards the upper division requirements of both. Joint honors in Canadian studies and another subject that require 50 upper division credit hours will therefore require 65 upper division credit hours in the two subjects (30 CNS plus 50 in the other subject minus 15 overlap). For joint honors with sociology or anthropology, 75 upper division credit hours are required (30 CNS plus 28 sociology plus 28 anthropology plus four additional sociology or anthropology minus 15 overlap with Canadian studies).

Students must also complete the key overlap courses specified below for the Canadian studies joint major and the other subject, as well as the French language qualification specified above. To determine the level of entry in the French language program, students must...
take a Department of French placement test. Students may challenge FREN 210, 211, 221 and 222. Please see "Course Challenge" on page 32.

**Canadian Content Courses**

There are two categories that carry Canadian studies credit. 'Internal' Canadian studies (CNS) courses are multidisciplinary or may be special topics courses, and are unique to the Canadian studies curriculum. See "Canadian Studies CNS" on page 342. The other category comprises predominantly Canadian content courses offered by other departments. These are listed below. Some are considered key and are identified at the bottom of each departmental listing. Asterisked courses (*) taken for Canadian studies credit require the approval of the Centre for Canadian Studies director. Additional courses may be approved for Canadian studies credit while others may be dropped. Check with the Centre for Canadian Studies for a current list.

**Faculty of Applied Sciences**

**School of Communication**
- CMNS 130-3 Explorations in Mass Communication
- CMNS 235-3 Introduction to Journalism in Canada
- CMNS 324-4 Media, Sports and Popular Culture
- CMNS 331-4 News Discourse as Political Communication
- CMNS 333-4 Broadcasting Policy in the Global Context
- CMNS 334-4 Cultural Policy
- CMNS 336-4 Telecommunication Regulation in North America
- CMNS 342-4 Science and Public Policy: Risk Communication
- CMNS 353-4 Social Contexts of Information Technology*
- CMNS 371-4 The Structure of the Book Publishing Industry in Canada
- CMNS 372-4 The Publishing Process
- CMNS 375-4 Magazine Publishing
- CMNS 433-4 Issues in Communication and Cultural Policy
- CMNS 437-4 Media Democratization: From Critique to Transformation
- CMNS 446-4 The Communication of Science and the Transfer of Technology*
- CMNS 453-4 Issues in the Information Society*
- CMNS 454-4 Computer Mediated Work and Workplace Communication*
- CMNS 456-4 Communication to Mitigate Disasters
- CMNS 472-4 Books, Markets and Readers*
- CMNS 474-4 The Business of Publishing

Key courses for Communication: CMNS 230, 331; FREN 122 or the former FREN 298

**Faculty of Arts and Social Sciences**

**Department of Archaeology**
- ARCH 223-3 The Prehistory of Canada
- ARCH 332-3 Special Topics in Archaeology I*
- ARCH 333-3 Special Topics in Archaeology II*
- ARCH 334-3 Special Topics in Archaeology III*
- ARCH 335-5 Special Laboratory Topics in Archaeology*
- ARCH 336-3 Special Topics in Prehistoric and Indigenous Art*
- ARCH 360-5 Native Cultures of North America
- ARCH 378-3 Pacific Northwest North America

Key courses for Archaeology: ARCH 223, 360, 378

**School of Criminology**
- CRIM 131-3 Introduction to the Criminal Justice System – A Total System Approach
- CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
- CRIM 230-3 Criminal Law
- CRIM 231-3 Introduction to the Judicial Process

CRIM 311-3 Minorities and the Criminal Justice System
CRIM 330-3 Criminal Procedure and Evidence
CRIM 331-3 Advanced Criminal Law
CRIM 335-3 Human Rights and Civil Liberties
CRIM 419-3 Indigenous Peoples, Crime and Criminal Justice

Key courses for School of Criminology: CRIM 131, 135, 230, 231, 330, 335

**School for the Contemporary Arts**
- FPA 236-3 Cinema in Canada

Key courses for the School for the Contemporary Arts: FPA 236

**Department of Economics**
- BUEC 280-3 Introduction to Labor Economics
- BUEC 384-3 Industrial Relations
- BUEC 391-3 Law in the Economic Society
- BUEC 396-3 The Structure of Industry
- BUEC 397-5 Government and Business*
- BUEC 433-5 Forecasting in Business and Economics
- ECON 261-3 Resources and the Economy of British Columbia
- ECON 353-5 Economic History of Canada
- ECON 362-4 Economics of Natural Resources*
- ECON 367-3 Transportation
- ECON 368-3 Regional Economic Analysis*
- ECON 381-5 Labor Economics
- ECON 390-3 Canadian Economic Policy
- ECON 410-3 Seminar in Monetary Theory*
- ECON 480-3 Seminar in the Economics of Labor Market Policy
- ECON 483-3 Selected Topics in Economics*
- ECON 484-3 Selected Topics in Economics*
- ECON 490-5 Seminar in Public Choice*
- ECON 496-3 Selected Topics in Economics*
- ECON 498-3 Directed Studies

Key courses for Economics: BUEC 391, ECON 353; any three of 381; BUEC 384, 485; ECON 390; BUEC 396, 397

**Department of English**
- ENGL 354-4 Canadian Literature to 1920
- ENGL 357-4 Canadian Literature Since 1920
- ENGL 455-4 Topics in Canadian Literature

Key courses for English: ENGL 354, 357, 359

**First Nations Studies Program**
- FNST 101-3 The Culture, Languages and Origins of Canada’s First Peoples
- FNST 201-3 Canadian Aboriginal People’s Perspective on History

Key courses for First Nations Studies: FNST 101, 201

**Department of French**
- FREN 230-3 Introduction to French-Canadian Literature
- FREN 342-4 Literature in Translation from the Francophone World*
- FREN 422-3 Canadian French
- FREN 430-3 The French-Canadian Novel and Theatre

FREN 480-2 Seminar I*

Key courses for French: FREN 230, 422, 430, 480

**Department of Geography**
- GEOG 162-3 Canada
- GEOG 264-3 Canadian Cities
- GEOG 265-3 Geography of British Columbia
- GEOG 322-4 World Resources
- GEOG 323-4 Industrial Location
- GEOG 421-4 Geography of Resource Development
- GEOG 426-4 Industrial Change and Local Development
- GEOG 441-4 Cities, Space and Politics
- GEOG 444-4 Regional Development and Planning II
- GEOG 445-4 Resource Planning
- GEOG 489-4 The Canadian North and Middle North

Key courses for Geography: GEOG 162, 462; one of 469

**Department of History**
- HIST 101-3 Canada to Confederation
- HIST 102-3 Canada Since Confederation
- HIST 201-3 The History of Western Canada
- HIST 204-3 The Social History of Canada
- HIST 326-4 History of Aboriginal Peoples of North America since 1850
- HIST 327-4 Canadian Labour and Working Class History
- HIST 328-4 The Province of Quebec from Confederation
- HIST 329-4 Canadian Family History
- HIST 424-4 Problems in the Cultural History of Canada
- HIST 425-4 Gender and History
- HIST 428-4 Problems in the Social and Economic History of Canada
- HIST 430-4 New France
- HIST 431-4 Problems in the History of British North America 1760-1850
- HIST 432-4 Problems in Environmental History
- HIST 436-4 British Columbia

Key courses for History: HIST 101, 102, 328; one of 201, 435; one of 424, 428; one of HIST 326, 327, 329

**Latin American Development Studies Program**
- LAS 325-3 Latin America

Key course for Latin American Development Studies: LAS 320

**Department of Political Science**
- POL 151-3 The Administration of Justice
- POL 221-3 Introduction to Canadian Government
- POL 222-3 Introduction to Canadian Politics
- POL 251-3 Introduction to Canadian Public Administration
- POL 252-3 Local Democracy and Governance
- POL 320-4 Canada and Latin America
- POL 321-4 The Canadian Federal System
- POL 322-4 Canadian Political Parties
- POL 323-4 Provincial Government and Politics
- POL 324-4 The Canadian Constitution
- POL 327-4 Globalization and the Canadian State
- POL 347-4 Introduction to Canadian Foreign Policy
- POL 352-4 Local and Urban Governance in Canada
- POL 353-4 Public Sector Management
- POL 354-4 Comparative Metropolitan Governance
- POL 355-4 Governing Instruments
- POL 420-4 Canadian International Security Relations
- POL 423-4 BC Government and Politics
- POL 424-4 Quebec Government and Politics
- POL 426-4 Canadian Political Behavior
- POL 428-4 Selected Topics in Canadian Government and Politics I
- POL 429-4 Selected Topics in Canadian Government and Politics II
- POL 451-4 Public Policy Analysis
- POL 454-4 Urban Public Policy Making*
- POL 455-4 Issues in Economic and Social Policy*
- POL 458-4 Selected Topics in Local and Urban Government and Politics*
- POL 459-4 Selected Topics in Public Policy, Public Administration and Public Law*

Key courses for Political Science: POL 221, 222, 321, 324, 451

**Department of Sociology and Anthropology**
- SA 100-4 Perspectives on Canadian Society
- SA 286-4 Aboriginal Peoples and British Columbia: Introduction
- SA 300-4 Canadian Social Structure
- SA 335-4 Gender Relations and Social Issues*
- SA 386-4 Native Peoples and Public Policy*
- SA 396-4 Selected Regional Areas*
- SA 400-4 Canadian Ethnic Minorities
- SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

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Key courses for Anthropology: SA 100, 400, 486
Key courses for Sociology: SA 100, 300, 400
Key courses for Sociology and Anthropology: SA 100, 300, 400, 486

Department of Women’s Studies
WS 101-3 Introduction to Women’s Issues in Canada
WS 201-3 Women in Canada 1600-1920
WS 202-3 Women in Canada 1920 to the Present
WS 301-4 Special Topics in Women’s Studies*
WS 302-4 Special Topics in Women’s Studies*
WS 303-4 Special Topics in Women’s Studies*
WS 307-3 Women and British Columbia
Key courses for Women’s Studies: WS 101, 201, 202, 307

Faculty of Business Administration
BUEC 280-3 Introduction to Labor Economics
BUS 303-3 Business, Society and Ethics
BUS 344-3 Business to Business Marketing
BUEC 384-3 Industrial Relations
BUEC 391-3 Law in the Economic Society
BUS 393-3 Commercial Law
BUEC 396-3 The Structure of Industry
BUS 403-3 Seminar in Business and Society*
BUS 449-3 Marketing Society
BUEC 433-5 Forecasting in Business and Economics
BUEC 488-3 Collective Bargaining
BUS 490-3 Selected Topics in Business Administration
BUS 491-3 Selected Topics in Business Administration
BUS 492-3 Selected Topics in Business Administration
BUS 493-3 Selected Topics in Business Administration
BUS 498-3 Directed Studies
BUS 499-5 Directed Studies*
Key courses for Business Administration: BUS 303, BUEC 280, BUEC 396.
Key courses for Business Administration and Economics: BUS 303, ECON 353, BUEC 391; any three of ECON 381, 390, BUEC 384, 396, 485

Faculty of Science
Department of Biological Sciences
BISC 310-3 The Natural History of British Columbia

Certificate in French Canadian Studies
The program serves full and part time students, and those seeking educational enrichment only who may be attracted by the opportunities which the Office of Continuing Studies offers, particularly through evening courses. French Canadian background material requires basic French language competency.

Requirements
Students must complete
FREN 230-3 Introduction to French-Canadian Literature
HIST 328-4 The Province of Quebec from Confederation
POL 404-4 Quebec Government and Politics
Students must also achieve competence in the French language by either
• completing six credit hours from group B courses below, or equivalent transfer credit as confirmed by a placement test administered by the Department of French. (Students who wish to concentrate on reading knowledge of French should take FREN 198 and the former FREN 298. The other courses listed stress speaking and understanding French.)
• or by passing a placement exam at the grade 12 French level, administered by the department.

List of Relevant Courses
In addition, at least 27 credit hours are required, taken from the list of relevant courses below, of which no more than six hours in group B may be counted.

Relevant Courses
Group A French Canadian Studies
CNS 160-3 The Social Background of Canada
CNS 210-3 The Foundations of Canadian Culture
CNS 280-3 Canadian Political Economy
CNS 390-3 Hockey in Canadian Popular Culture*
CNS 391-3 Special Canadian Topics*
CNS 490-5 The Canadian Intellectual Tradition*
CNS 491-3 Technology and Canadian Society*
FREN 230-3 Introduction to French-Canadian Literature
FREN 342-4 Literature in Transition from the Francophone World*
FREN 422-3 Canadian French
FREN 430-3 The French-Canadian Novel and Theatre
HIST 101-3 Canada to Confederation
HIST 102-3 Canada Since Confederation
HIST 328-4 The Province of Quebec from Confederation
HIST 430-4 New France
POL 424-4 Quebec Government and Politics

Group B French Language
FREN 121-3 Introductory French I
FREN 122-3 Introductory French II
FREN 210-3 Intermediate French I
FREN 199-3 Writing French I: Spelling and Grammar
FREN 211-3 Intermediate French II
FREN 221-3 French Writing I
FREN 215-3 Intermediate French: Oral Practice
FREN 222-3 French Writing II
FREN 298-3 French for Reading Knowledge II
FREN 300-3 Advanced French – Oral Practice
FREN 301-3 Advanced French – Composition
FREN 303-3 Advanced French – Grammar

*This course may be applied to the certificate program with approval of the Department of French. Approval depends upon the extent of French Canadian content.

Cognitive Science Program
5605 Diamond Building, 778.782.7127 Tel, 778.782.7128 Fax, www.sfu.ca/cognitive-science
Director
F. Popowich BSc, MSc (S Fraser), PhD (Edin)
Professor
F. J. Pelletier BS, MA (Nebraska), MSc, MSc (Alta), PhD (Calif), Canada Research Chair
Associate Professor
N. Hedberg BA, PhD (Minn)**
Assistent Professor
M. Blair BS (Maryland), MA, PhD (Arizona State)
Advisor
Ms. S. Senaratne, 5605 Diamond Building, 778.782.7127, ssenarat@sfu.ca
Joint appointment in linguistics, philosophy
**Joint appointment in linguistics
The following programs are offered.
• BA with a major in cognitive science
• Honors in cognitive science: option A and option B

In the last 30 years, research has surged in cognition affecting many fields including psychology, linguistics, philosophy, computing science, education, anthropology, communications, and sociology. The greatest impact within psychology has been the sub-fields of psycholinguistics, cognitive psychology, and developmental psychology; within philosophy, on philosophy of language, philosophical logic, and philosophy of mind; within linguistics, on semantics, syntax, phonology, and phonetics; and within computing science, on artificial intelligence.

Those working in these areas find they read the same literature and ask closely related questions in research and teaching. Evidently, increasing work in these fields belongs to a common area which cuts across traditional departmental organization. Several journals and many essay collections contain articles from each field. At Simon Fraser University, this interrelation is reflected in courses which draw on research; courses in cognition and language are spread over different departments. This program offers a structured and integrated study of cognition.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 132.

Breadth Requirements
Students must fulfill the Faculty of Arts and Social Sciences breadth requirements (see “Writing, Quantitative, and Breadth Requirements” on page 132).

Languages Other Than English
Most graduate schools require some proficiency in one or two languages other than English. Those who contemplate graduate studies are advised to include language courses in their programs.

Major Program
A 2.0 GPA or higher in each discipline is required for continuation and graduation. Only courses from each discipline, that satisfy the requirements of the program, will be used to calculate this GPA.

Lower Division Requirements
Introductory Courses
(21-27 credit hours)
A student must take COGS 100 plus the following.

Computing Science
Students must complete either
CMPT 126-3 Introduction to Computing Science and Programming
or both of
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
Additionally students who choose intermediate level computing science, must complete
MACM 101-3 Discrete Mathematics I
Linguistics
LING 220-3 Introduction to Linguistics
Additionally, students who choose intermediate level linguistics must complete the following course.
LING 130-3 Practical Phonetics
Philosophy
PHIL 100-3 Knowledge and Reality

*Approved by the university.  **Approved by the department.

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Psychology
PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II

Intermediate Courses
(18-25 credit hours)
A student must fulfill the requirements listed below for at least three of the four disciplines.

Cognitive Science
COGS 200-3 Foundations of Cognitive Science

Computing Science
CMPT 225-3 Data Structures and Programming

Linguistics
LING 221-3 Introduction to Phonology
LING 222-3 Introduction to Syntax

Philosophy
PHIL 201-3 Epistemology
PHIL 210-4 Natural Deductive Logic I

Psychology
PSYC 201-4 Introduction to Research Methods in Psychology
PSYC 222-3 Introduction to Cognitive Psychology
PSYC 280-3 Introduction to Biological Psychology

Upper Division Requirements
(33-35 credit hours)
Students must take both
COGS 300-3 Selected Topics in Cognitive Science
COGS 310-3 Consciousness
plus fulfill the requirements listed below for the three disciplines selected previously at the intermediate level.

Computing Science
one of
CMPT 379-3 Compiler Design
CMPT 383-3 Comparative Programming Languages
CMPT 384-3 Symbolic Computing
MACM 300-3 Formal Languages and Automata with Applications
plus any two of
CMPT 310-3 Artificial Intelligence Survey
CMPT 411-3 Knowledge Representation
CMPT 412-3 Computational Vision (or CMPT 414)
CMPT 413-3 Computational Linguistics
CMPT 417-3 Intelligent Systems
CMPT 418-3 Computational Cognitive Architecture
CMPT 419-3 Topics in Artificial Intelligence

Linguistics
any three of
LING 321-3 Phonology
LING 322-3 Syntax
LING 323-3 Morphology
LING 324-3 Semantics
LING 330-3 Phonetics
LING 350-3 First Language Acquisition
LING 400-3 Formal Linguistics
LING 480-3 Topics in Linguistics I*
LING 481-3 Topics in Linguistics II*  
*relevant topics include Discourse Analysis, Functional Linguistics, Language and the Brain, Computational Linguistics

Philosophy
any three of
PHIL 302-3 Topics in Epistemology and Metaphysics
PHIL 310-3 Modal Logic and its Applications
PHIL 314-3 Topics in Logic I
PHIL 341-3 Philosophy of Science
PHIL 343-3 Philosophy of Mind
PHIL 344-3 Philosophy of Language I
PHIL 444-4 Philosophy of Language II

Psychology
any three of
PSYC 303-3 Perception
PSYC 325-4 Memory and Mind

Honors Program
A GPA of 3.0 in all courses in the cognitive science program is required for entrance and continuation in this program. Those interested in the honors program should consult the co-ordinator of the cognitive science program.

Two options are available: option A and option B.

Option A
A student must fulfill the requirements for a major in cognitive science and choose the courses listed below for one of the disciplines, and complete
COGS 490-5 Honors Project I
COGS 491-5 Honors Project II

Computing Science
Students must complete one of the following courses which has not been taken previously
CMPT 379-3 Compiler Design
CMPT 383-3 Comparative Programming Languages
CMPT 384-3 Symbolic Computing
MACM 300-3 Formal Languages and Automata with Applications
plus any three of the following courses which have not been taken previously
CMPT 310-3 Artificial Intelligence Survey
CMPT 411-3 Knowledge Representation
CMPT 412-3 Computational Vision (or CMPT 414)
CMPT 413-3 Computational Linguistics
CMPT 417-3 Intelligent Systems
CMPT 418-3 Computational Cognitive Architecture
CMPT 419-3 Topics in Artificial Intelligence

Linguistics
Students must complete any four of the following courses which have not been taken previously
LING 400-3 Formal Linguistics
LING 401-3 Topics in Phonetics
LING 403-3 Topics in Phonology
LING 405-3 Topics in Syntax
LING 406-3 Topics in Semantics
LING 423-3 Topics in Morphology
LING 480-3 Topics in Linguistics I*
LING 481-3 Topics in Linguistics II*  
*relevant topics include Discourse Analysis, Functional Linguistics, Language and the Brain, Computational Linguistics

Option B
To fulfill the requirements for a major, choose any combination of four courses which have not been taken previously
PSYC 330-3 Attention
PSYC 335-3 Sensation I
PSYC 354-3 Development of Children’s Thinking
PSYC 363-3 Psychopharmacology
PSYC 382-3 Cognitive Neuroscience
PSYC 385-3 Evolutionary Psychology

Co-operative Education
This program, for qualified students who wish to engage in a practical experience, entails planned study and employment terms. To be eligible, students must normally have completed 30 credit hours including COGS 100 and four other COGS courses. At least 15 of these 30 must be completed at Simon Fraser University with a minimum CGPA of 2.75.

College transfer students must complete at least 15 credit hours at Simon Fraser University for co-op admission and must satisfy the requirements given above, or their equivalents. College transfer students who participated in co-op programs elsewhere may be credited with the term(s) already taken. The applicability of such terms depends on the evaluation of the Cognitive Science Program.

The following four courses are completed during four work terms.
COGS 370-0 Cognitive Science Practicum I
COGS 371-0 Cognitive Science Practicum II
COGS 470-0 Cognitive Science Practicum III
COGS 471-0 Cognitive Science Practicum IV

Arrangements for work terms are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one term in advance.

To continue in the program, students must maintain a minimum 2.75 CGPA in the academic course work. Contact the cognitive science co-ordinator for further information; see “Co-operative Education” on page 237.

School for the Contemporary Arts
Room 600 SCA, 778.782.3363 Tel, 778.782.5907 Fax, www.sfu.ca/scsa, ca@sfu.ca

Interim Director
M.S. Gottfried BA (C'dia), MA (McG) – music

Professors Emeriti
S.A. Aloi BA (Cornell), MA (Col) – dance
G. Strate BA, LLB (Alta) – dance

Dena Wosk University Professorship in Art and Culture Studies
L. Marks BA (Swarthmore), MA, PhD (Rhod)

Professors
C.V.A. Browne BA (RMC), MA (S Fraser) – film
A. Clay BFA (Nova Scotia Art & Des), MFA (Br Col) – visual art
D.K. MacIntyre BMus, MMus (Vic, BC) – music/interdisciplinary
G. Snider BS, MFA (Wis) – visual art
B.D. Truax BSc (McM), MMus (Br Col) – music*
O. Underhill BMus (Vic, BC), MA (NY State) – music

C. Welby BA (Lond Inst) – film

Associate Professors
H. Daniel MA (City University, London, UK), PhD (Brist) – dance
D. Hawkins BFA (Nova Scotia Art & Des), MA, PhD (Leeds) – interdisciplinary
M. Eist BA (American DC), MFA (NY) – dance

J. Garay – dance
M.S. Gottfried BA (C'dia), MA (McG) – music
P. Gruben BA (Rice) – film
D.D. Kugler BA (Ohio Northern), MFA (York, Can) – theatre
## Programs Offered

The School for the Contemporary Arts offers the following programs:

- Major in Art and Culture Studies (BA)
- Major in Dance (BFA)
- Major in Film (BFA)
- Major in Music (BFA)
- Major in Theatre (BFA)
- Major in Visual Arts (BFA)
- Joint Major in Art and Culture Studies and Anthropology
- Joint Major in Art and Culture Studies and Sociology
- Extended Minor in Dance
- Extended Minor in Film
- Extended Minor in Music
- Extended Minor in Theatre
- Extended Minor in Visual Arts
- Minor in Art and Culture Studies
- Minor in Fine and Performing Arts
- Minor in Film and Video Studies

**About the School’s Course Offerings**

Students are encouraged to take advantage whenever possible of interdisciplinary offerings with the school. As many of the programs depend on a continuing sequence of courses to be taken in order, students should plan their programs carefully to gain the maximum benefit and efficiency from their course of study. Note that not all courses are offered every term and several are offered on a rotational basis, i.e. every third or fourth term. An advisor is available in the school’s main office to help students plan their programs.

Students are reminded that the school is an interdisciplinary fine and performing arts department, and are strongly advised to acquaint themselves with the many disciplinary courses that are available.

### Non-Specialist FPA Courses

The following FPA courses may be of particular interest to students in other departments.

#### School-wide courses:

- FPA 111 – art and culture studies

#### Lower Division Theory and History Courses

- FPA 104-3 Music Fundamentals
- FPA 111-3 Issues in the Fine and Performing Arts
- FPA 210-3 Artworks, Theories, Contexts
- FPA 136-3 The History and Aesthetics of Cinema I
- FPA 137-3 The History and Aesthetics of Cinema II
- FPA 140-3 Music After 1900
- FPA 167-3 Visual Art and Culture I
- FPA 168-3 Visual Art and Culture II
- FPA 227-3 History of Dance: From the 20th Century to the Present
- FPA 228W-3 Dance Aesthetics
- FPA 229-3 Selected Topics in Dance I
- FPA 233-3 Experimental Film and Video
- FPA 236-3 Cinema in Canada
- FPA 257-3 Context of Theatre
- FPA 259-3 Selected Topics in Theatre I
- FPA 269-3 Selected Topics in Visual Arts I
- FPA 289-3 Selected Topics in the Fine and Performing Arts I

### Special Topics Courses

The subject matter (and prerequisites) of special or selected topics courses vary by term.

### Prior Approval Prerequisite

Where a prerequisite is or includes ‘prior approval,’ approval must be obtained before enrolling in the course. Contact the school for further information.

### Courses Divided by Discipline

FPA course disciplines are indicated by the middle digit of the course number:

- 0, 8 interdisciplinary or school-wide
- 1 art and culture studies
- 2 dance
- 3 film
- 4 music
- 5 performance stream in theatre
- 6 visual art
- 7 production stream in theatre
- 9 video (film)

Examples: FPA 120 – dance; FPA 140 – music; FPA 111 – art and culture studies

### Suggested Courses for Interdisciplinary Requirements

For clarification, the courses listed below are the offerings from individual areas available to students in the school requiring credit hours in other disciplines, either in studio or in the history/theory. Students from the university at large may also find these courses of interest. Students are also advised that some of the courses listed below may have prerequisites.

### Lower Division Theory and History Courses

- FPA 104-3 Music Fundamentals
- FPA 111-3 Issues in the Fine and Performing Arts
- FPA 210-3 Artworks, Theories, Contexts
- FPA 136-3 The History and Aesthetics of Cinema I
- FPA 137-3 The History and Aesthetics of Cinema II
- FPA 140-3 Music After 1900
- FPA 167-3 Visual Art and Culture I
- FPA 168-3 Visual Art and Culture II
- FPA 227-3 History of Dance: From the 20th Century to the Present
- FPA 228-3 Dance Aesthetics
- FPA 229-3 Selected Topics in Dance I
- FPA 233-3 Experimental Film and Video
- FPA 236-3 Cinema in Canada
- FPA 257-3 Context of Theatre
- FPA 259-3 Selected Topics in Theatre I
- FPA 269-3 Selected Topics in Visual Arts I
- FPA 289-3 Selected Topics in the Fine and Performing Arts I

### Lower Division Studio Courses

- FPA 120-3 Introduction to Contemporary Dance
- FPA 124-3 Dance Improvisation
- FPA 129-3 Fundamental Integration of Human Movement
- FPA 145-3 Introduction to Music Composition
- FPA 147-3 Introduction to Electroacoustic Music
- FPA 152-3 Introduction to Acting I
- FPA 153-3 Introduction to Acting II
- FPA 160-3 Introductory Studio in Visual Arts I
- FPA 161-3 Introductory Studio in Visual Arts II
- FPA 170-3 Introduction to Production Technology
- FPA 171-3 Stage and Production Management
- FPA 229-3 Selected Topics in Dance I
- FPA 232-3 Film Sound
- FPA 238-3 Screencraft I
- FPA 243-3 Gamelan I
- FPA 247-3 Electroacoustic Music I
- FPA 249-3 Selected Topics in Music I
- FPA 259-3 Selected Topics in Theatre I
- FPA 263-3 Methods and Concepts: Drawing Practices
- FPA 264-3 Methods and Concepts: Painting Practices
- FPA 265-3 Methods and Concepts: Sculptural Practices
- FPA 265-3 Methods and Concepts: Photographic Practices
- FPA 269-3 Methods and Concepts: Spatial Presentation
- FPA 270-3 Technical Theatre
- FPA 289-3 Selected Topics in the Fine and Performing Arts I
- FPA 290-3 Video Production I

*this course may only count in this category when it is offered as a studio course

### Upper Division Theory and History Courses

- FPA 310-4 Interdisciplinary Methods
- FPA 311-4 Interdisciplinary Studies in the Arts
- FPA 312-3 Intermediate Seminar in Art, Culture
- FPA 313-5 Arts, Audience, Patronage, Institutions

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**Simon Fraser University 2007 • 2008 Calendar**

J. Levitin BA, MA (Wash), PhD (NY State) – film
J. Radul BA (S Fraser), MFA (Bard) – visual art
P. Stella AB (ill) – theatre
J. Yoon BA (Br Coll), BFA (Emily Carr), MFA (C'dia) – visual art

**Assistant Professors**

A. Eigenthal BMus (Br Coll), MA (S Fraser), DM (Northwestern) – music
R. Kitos BA (Bard), MFA (Wash) – dance
D. Oleksijczuk BA, MA (Tor), PhD (Br Coll)
C. Pavlak BA (Cornell), PhD (Duke)
S. Hill MFA (York, Can)

**Senior Lecturers**

R. Groeninge BA (Calvin Coll, Michigan), MSc (Wis) – film
G. Harris – production and design, technical theatre
B. Hegland BA (Leth), MFA (ill) – production and design, technical theatre
J.A. Macfarlane BA (Reed) – production and design, technical theatre
G. Harris – production and design, technical theatre
C. Prophet BA (York, Can) – dance

**Laboratory Instructors**

T. Kerr – film
A. Smith – dance, music

Advisor

Mr. D. Lastoria BA (S Fraser), CA 601, 778.781.3363,
c_advisor@sfu.ca

*joint appointment with communication
**Joint appointment with women’s studies

The school is committed to the study, production and promotion of contemporary art.

The school’s philosophy is that the theory and practice of art, the doing and thinking, cannot be separated: all programs within the school, therefore, combine theoretical and critical study with practical experience. Theoretical and critical studies include the historical development of and the interrelationships among the arts, the process of art-making, and the relationship between art and the world within which it is made. Practical experience is available within studio or laboratory courses, and students are encouraged to acquire additional practical experience by participating in extracurricular productions, exhibitions or performances.

The school offers general interest courses and sponsors a variety of public events in order to make contemporary art more accessible to, and to provide cultural activities for, the wider community.

**Admission Requirements**

Admission to all contemporary arts programs and courses is contingent upon University admission. Contact Student Services for information on admission, requirements and deadlines.

Entry to all programs and to many courses is by audition, interview or application. Contact the office for information on procedures and deadlines.

Although the University operates on a trimester system, most FPA courses are planned in a two term (fall and spring) sequence. Consequently, students seek fall term (September) entry to the School for the Contemporary Arts programs and are advised to contact the school in the preceding January for program entry and requirements information.

**Transfer Credit and Advanced Standing**

Unassigned or general elective (type 2 and 3, respectively) transfer credit which has been awarded for courses completed at other recognized post-secondary institutions, will not automatically entitle students to advanced standing in the school’s programs. Advanced standing is generally given on an individual basis as a result of an audition or interview.
Art and Culture Studies Major Program

FPA 247-3 Electroacoustic Music I (Quantitative)
FPA 268-3 Visual Art and Culture II
FPA 310-4 Interdisciplinary Methods
FPA 314-3 Critical Writing in the Arts

Bachelor of Arts Degree Program

Art and Culture Studies Major Program

This major leads to a bachelor of arts degree. Within the fine and performing arts, there are lively debates about the meaning and significance of individual artworks, as well as their relationships to audiences and to other forms of culture. The program investigates art and culture with attention to the historically changing forms of class, gender, race, ethnicity, sexuality and aesthetics. It aims to provide students with the knowledge, research and communication skills needed to participate effectively in contemporary debates about art and culture. The core program includes two introductory studio courses from a multidisciplinary range of choices; these provide students with experience of the creative process in dance, music, theatre, video or visual art. The program is interdisciplinary in nature, but also provides a knowledge of and sensitivity to the distinctive qualities of specific art forms. Course selection beyond the program’s core is flexible and students are encouraged to shape their studies in the school, or in the University at large, in relation to their own interests and curiosity.

Lower Division Requirements

Students must complete 27 credit hours, as follows. All of FPA 136-3 History and Aesthetics of Cinema I FPA 137-3 History and Aesthetics of Cinema II FPA 167-3 Visual Art and Culture I FPA 168-3 Visual Art and Culture II FPA 210-3 Arts, Theories, Contexts Additional Disciplinary History and Theory Courses Students must complete at least six credit hours of lower division disciplinary history or theory courses from within the School for the Contemporary Arts.

Note: with permission, other courses that are germane to the student’s Art and Culture Studies program may count toward this requirement. Studio Courses Students must complete at least six credit hours of studio courses from within the School for the Contemporary Arts.

Upper Division Requirements

A minimum of 30 credit hours must be completed as follows. FPA 310-4 Interdisciplinary Methods plus 18 to 20 credit hours from the following FPA 311-4 Interdisciplinary Studies in the Arts* FPA 312-3 Intermediate Seminar in Art and Culture* FPA 313-5 Arts, Audience, Patronage, Institutions* FPA 314-3 Readings in the History of Art and Culture* FPA 411-3 Interdisciplinary Studies in the Contemporary Arts* FPA 412-4 Advanced Seminar in Art and Culture* FPA 413-3 Advanced Topic in the History of Art and Culture* FPA 416-3 Practices in Art and Culture* (FPA 311, 312, 313, 314, 315 taken prior to 99-2 will count towards this requirement.)

This course may be taken more than once for credit if the topic changes Additional Courses Six to eight credit hours of additional upper division courses in the fine or performing arts must be completed. Courses in the above list of Art and Culture courses can be used to fulfill this requirement, as can other history, theory or studio courses offered by the School for the Contemporary Arts. Relevant courses in other departments may also be used to fulfill this requirement. Student advisors in the School for the Contemporary Arts can provide students with a list of courses in other departments that are pertinent to the Art and Culture program. Students can also obtain individual approvals for courses other than FPA courses by providing course descriptions to the student advisors in the school. Students are encouraged to plan in advance as some upper division courses in the school and in other departments may not be offered each year. Students who wish to take upper division courses must make sure they have the disciplinary prerequisites and should be aware that studio courses may have limited enrollments.

Art and Culture Studies Minor

Within the fine and performing arts, there are lively debates about the meaning and significance of individual artworks, as well as their relationships to audiences and to other forms of culture. The Art and Culture studies investigates the arts with attention to the historically changing forms of class, gender, race, ethnicity, sexuality and aesthetics. The program is interdisciplinary in nature, but also provides a knowledge of and sensitivity to the specific qualities of diverse artforms. The minor program is an excellent foundation for a dynamic, lifelong interest in the fine and performing arts, while complementing other programs of study.

Lower Division Requirements

Students are required to complete a minimum of 12 credit hours as follows: one of FPA 167-3 Visual Art and Culture I FPA 168-3 Visual Art and Culture II plus FPA 313-5 Arts, Audience, Patronage, Institutions* FPA 314-3 Readings in the History of Art and Culture* FPA 413-3 Advanced Topic in the History of Art and Culture* plus three credit hours of lower division history, theory, or studio courses within the School for the Contemporary Arts.

Upper Division Requirements

A minimum of 17 credit hours must be completed as follows:

FPA 310-4 Interdisciplinary Methods plus a minimum of 10 credit hours from the following:


This course may be taken more than once for credit if the topic changes plus three credit hours of upper division history or theory courses from within the School for the Contemporary Arts. The Art and Culture courses in the list above can be used to fulfill this requirement.

Bachelor of Fine Arts Degree Program

Degree Requirements

To be awarded a Bachelor of Fine Arts, students must complete a minimum of 120 credit hours, 30 of which must satisfy the Faculty of Arts and Social Sciences breadth requirements. (See “Writing, Quantitative, and Breadth Requirements” on page 130.) Within the minimum total of 120 credit hours, a minimum of 45 credit hours must be in upper division courses. To complete a Contemporary Arts major, students must include the following credit hours in the 120 that are required for this degree:

• dance major 78 credit hours
• film major 75 credit hours
Dance Major Program

The BFA major in dance approaches dance as an art form and integrates theory with creative and technical studio courses. Emphasis is given to contemporary dance technique, composition and experimentation. Courses are also offered in body conditioning practices, ballet, history and criticism, and movement analysis. Course work in other artistic disciplines is encouraged, and opportunities for participation in a variety of productions are available. The program is intended for students who desire to study dance in relation to other contemporary art disciplines and academic fields.

Entry to FPA 122 Contemporary Dance I is by audition/interview usually scheduled for early spring or late summer. Contact the general office to make an appointment.

Continuation in the dance major is contingent upon the successful completion of FPA 122, 123, 124 and 129 and the approval of the Dance Area. Interviews will be held at the end of the first year and approval will be based on the student's potential, progress, academic record and suitability for the program.

Students are encouraged to plan their program in consultation with the School for the Contemporary Arts' advisor.

Lower Division Requirements

A minimum of 40 credit hours must be completed including all of:
- FPA 111-3 Issues in the Fine and Performing Arts
- FPA 122-4 Contemporary Dance I
- FPA 123-4 Contemporary Dance II
- FPA 124-3 Dance Improvisation
- FPA 129-3 Fundamental Integration of Human Movement
- FPA 220-4 Contemporary Dance III
- FPA 221-4 Contemporary Dance IV
- FPA 224-3 Dance Composition I
- FPA 227-3 History of Dance: From the 20th Century to the Present
- FPA 228W-3 Dance Aesthetics

plus six additional credit hours in lower division FPA courses outside of dance as follows:

and one of:
- FPA 147-3 Introduction to Electroacoustic Music
- FPA 150-3 Introduction to Acting I
- FPA 160-3 Introductory Studio in Visual Art I
- FPA 170-3 Introduction to Production Technology
- FPA 171-3 Introduction to Stage and Production Management
- FPA 290-3 Video Production I

and one of:
- FPA 136-3 The History and Aesthetics of Cinema I
- FPA 137-3 The History and Aesthetics of Cinema II
- FPA 140-3 Music After 1900
- FPA 167-3 Visual Art and Culture I
- FPA 168-3 Visual Art and Culture II
- FPA 210-3 Arts, Theories, Contexts
- FPA 247-3 Electroacoustic Music I
- FPA 270-3 Production Ensemble I
- FPA 271-3 Production Ensemble II

Upper Division Requirements

A minimum of 38 credit hours must be completed including all of:
- FPA 320-4 Contemporary Dance V
- FPA 321-4 Contemporary Dance VI
- FPA 324-3 New Dance Composition

plus 18 credit hours selected from the following:
- FPA 322-3 Ballet I
- FPA 323-3 Ballet II
- FPA 325-3 Special Project in Dance Composition
- FPA 326-4 Repertory I
- FPA 327-4 Repertory II
- FPA 420-4 Contemporary Dance VII
- FPA 421-4 Contemporary Dance VIII
- FPA 425-4 Intensive Studies in Performance
- FPA 426-3 Dance/Movement Analysis
- FPA 427-3 Ballet III
- FPA 428-3 Ballet IV
- FPA 429-3 Ballet V

plus nine upper division FPA credit hours including one upper division history or theory course

*other dance related courses may be substituted with permission of the school

Program with National Ballet School

In addition to the BFA in dance and the extended minor, the School for the Contemporary Arts offers a combined degree/diploma program with the National Ballet School Teachers' Training Program. This five year program allows students to initiate their studies at Simon Fraser University or at the National Ballet School (NBS). The students who begin this program at Simon Fraser University will spend three years at Simon Fraser University and two years at NBS and receive a BFA degree and a National Ballet School Teachers' Training diploma. Students who transfer to Simon Fraser University after three years of study at NBS will complete two years at Simon Fraser University and receive a Bachelor of General Studies degree and the NBS Teachers' Training Diploma.

Dance Extended Minor

This program is intended primarily for students who wish to obtain a BA degree with a view to teaching dance in the public schools. It may be used in combination with another extended minor. The program is balanced with dance technique, composition and theory, and some work in a relevant art discipline other than dance.

Entry to FPA 122 is by audition/interview usually scheduled for early spring and late summer. Contact the general office to make an audition appointment.

Continuation in the dance extended minor will be contingent upon the successful completion of FPA 122, 123, 124 and 129 and the approval of the Dance Area. Interviews will be held at the end of the first year and approval will be based on the student's potential, progress, academic record and suitability for the program.

Students are encouraged to plan their program in consultation with the school's advisor.

Students without sufficient dance training to audition for program entry may enroll in FPA 120.

Lower Division Requirements

A minimum of 17 credit hours in dance must be completed including all of:
- FPA 122-4 Contemporary Dance I
- FPA 123-4 Contemporary Dance II
- FPA 124-3 Dance Improvisation
- FPA 129-3 Fundamental Integration of Human Movement
- FPA 220-4 Contemporary Dance III
- FPA 221-4 Contemporary Dance IV
- FPA 224-3 Dance Composition I

plus one of:
- FPA 227-3 History of Dance: The 20th Century
- FPA 228W-3 Dance Aesthetics

plus one of:
- FPA 111-3 Issues in the Fine and Performing Arts
- FPA 140-3 Music After 1900
- FPA 150-3 Introduction to Acting I
- FPA 170-3 Introduction to Production Technology

Upper Division Requirements

A minimum of 17 credit hours in dance must be completed including all of:
- FPA 320-4 Contemporary Dance V
- FPA 321-4 Contemporary Dance VI
- plus six credit hours minimum selected from:
  - FPA 322-3 Ballet I
  - FPA 323-3 Ballet II
  - FPA 325-3 Special Project in Dance Composition
  - FPA 326-4 Repertory I
  - FPA 327-4 Repertory II
  - FPA 420-4 Contemporary Dance VII
  - FPA 421-4 Contemporary Dance VIII
  - FPA 425-4 Intensive Studies in Performance
  - FPA 426-3 Dance/Movement Analysis
  - FPA 427-3 Ballet III
  - FPA 428-3 Ballet IV
  - FPA 429-3 Ballet V

plus one upper division FPA course

Film Major Program

The intent of the BFA major in film is to provide a balanced program of creative, technical and analytical studies within the interdisciplinary setting of the School for the Contemporary Arts. Film and video production courses emphasize the creation of original work as well as the acquisition of technical skills. Film courses which familiarize students with the aesthetic and social issues surrounding contemporary film and video practice are an integral part of the curriculum.

Students augment their understanding of the components of film and video through interdisciplinary studies and projects. Directed study courses are available for upper division students wishing to work independently beyond regular course offerings.

Entry to all first year film production courses required for the major or extended minor is by questionnaire and interview. Contact the school in early January prior to your attendance at Simon Fraser University to request an information letter and questionnaire.

Film students who wish to complete the film major may apply for admission to the BFA major program after completing FPA 231, normally at the end of the second year of study. Approval will be based on the student’s creative work and academic record in required lower division courses.

The attention of students whose interest in film is related primarily to its historical, critical, or theoretical aspects, is directed to the art and culture studies major program, leading to a BA degree, and to the film and video studies minor program.

Lower Division Requirements

A minimum of 44 credit hours must be completed including all of:
- FPA 111-3 Issues in the Fine and Performing Arts
- FPA 130-4 Fundamentals of Film
- FPA 131-4 Filmmaking I
- FPA 136-3 The History and Aesthetics of Cinema I
- FPA 137-3 The History and Aesthetics of Cinema II
- FPA 230-5 Filmmaking II
- FPA 231-5 Filmmaking III
- FPA 233-2 The Techniques of Film
  - plus one of:
    - FPA 236-3 Cinema in Canada
    - FPA 237-3 Selected Topics in Film and Video Studies
  - plus one of:
    - FPA 232-3 Film Sound
    - FPA 238-3 Screenwriting I
    - FPA 290-3 Video Production I
  - *with prior approval, students may substitute lower division courses from other departments devoted to a film or video topic to fulfill this requirement
  - **may be repeated under another topic
  - plus six credit hours of lower division FPA studio courses outside Film. Students may apply CMNS 258 toward this requirement.
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plus another FPA history or critical course outside Film.

Upper Division Requirements
A minimum of 31 credit hours must be completed including three of:
FPA 323-3 Film Production Seminar
FPA 334-3 Studio Courses in Film and Video Production
FPA 335-3 Studies in Film and Video Production
FPA 336-3 Cinema in Canada
FPA 337-3 Intermediate Selected Topics in Film and Video Studies***
FPA 338-3 Advanced Seminar in Film and Video Studies***
**with prior approval, students may substitute upper division courses devoted to a film or video studies topic in other departments, or in directed study in film studies, to fulfill this requirement

***may be repeated under another topic
plus a minimum of 19 credit hours from the following
FPA 339-3 Video Production II
FPA 393-2 Techniques of Video
FPA 430-5 Filmmaking IV
FPA 432-5 Filmmaking V
With prior permission, a directed study course (FPA 400, 402 or 404), a film studies course, or another upper division FPA course may be substituted for one of the above.

plus one of
FPA 310-4 Interdisciplinary Methods
FPA 311-4 Interdisciplinary Studies in the Arts
FPA 312-3 Intermediate Seminar in Art and Culture
FPA 313-5 Arts, Audience, Patronage, Institutions
FPA 314-3 Readings in the History of Art and Culture
FPA 411-3 Interdisciplinary Studies in the Contemporary Arts
FPA 412-3 Advanced Seminar in Art and Culture Studies
FPA 414-3 Advanced Topic in the History of Art and Culture
FPA 416-3 Practices in Art and Culture
or another upper division FPA history or critical course outside film.

Film Extended Minor
This program is for students who wish to apply their broad range studies from other University programs to film and video production. Film has affinities with many disciplines within the social sciences and humanities, as well as business and communication. Students from other contemporary arts areas may develop specific skills such as composing for film, multimedia installation, or directing actors through a combination of a film extended minor with another extended minor in an appropriate area.

Entry to all film production courses is by questionnaire and interview. Contact the school by early January to request an information letter and questionnaire.

Lower Division Requirements
A minimum of 28 credit hours must be completed including all of
FPA 111-3 Issues in the Fine and Performing Arts
FPA 130-4 Fundamentals of Film
FPA 131-4 Filmmaking I
FPA 132-4 Film Theory
FPA 133-5 Cinematography and Lighting
FPA 234-3 Screenwriting II
FPA 235-3 Intermediate Selected Topics in Film and Video Studies
FPA 236-3 Film Production
FPA 237-3 Selected Topics in Film and Video Studies* plus at least eight credit hours from among
FPA 230-5 Filmmaking II
FPA 231-5 Filmmaking III
FPA 232-3 Film Sound
FPA 233-2 The Techniques of Film
FPA 238-3 Screenwriting I
FPA 290-3 Video Production I
plus three credit hours from another lower division FPA course.
*this course may include studies in film and video analysis, national cinemas, genre, political cinema, etc., and may be repeated for credit when a different topic is offered.

Upper Division Requirements
A minimum of 17 credit hours must be completed including at least three of
FPA 332-3 Film Production Seminar
FPA 334-3 Selected Topics in Film and Video Production
FPA 338-3 Screenwriting II
FPA 339-3 Directed and Acting for Film and Video
FPA 390-3 Video Production II
FPA 393-2 Techniques of Video
An upper division FPA studio course outside film may be substituted for one of the above.

at least one of
FPA 335-4 Introduction to Film Theory
FPA 337-3 Intermediate Selected Topics in Film and Video Studies* FPA 436-3 Advanced Seminar in Film and Video Studies*

Music Major Program
The bachelor of fine arts – major in music is a flexible program that offers several options for the music student who wishes to pursue an interest in composition, electroacoustic music, world music or interdisciplinary collaboration. Complementary courses in music history, theory and criticism provide an integral balance to the in-depth studio nature of the program.

The program takes full advantage of the opportunities to experience and study other art forms that are provided in the School for the Contemporary Arts. Students are required to take studio courses in other art disciplines as well as interdisciplinary courses in history, theory and criticism.

Entry to specific courses required for the Music major is by interview, usually scheduled for early spring and late summer. Contact the general office to make an appointment.

The attention of students whose interest in music is related primarily to its historical, critical, or theoretical aspects, is directed to the art and culture studies major program, leading to a BA degree.

Lower Division Requirements
Students must complete a minimum of 39 credit hours including all of
FPA 111-3 Issues in the Fine and Performing Arts
FPA 140-3 Music After 1900
FPA 141-3 Introduction to Electroacoustic Music
FPA 145-3 Introduction to Music Composition and Theory
FPA 147-3 Introduction to Electroacoustic Music
FPA 240-3 Contemporary Music Performance I
FPA 244-3 Theory of Contemporary Music
FPA 245-3 Composition I
FPA 246-3 Composition II
FPA 247-3 Electroacoustic Music I
FPA 248-3 Conducting I
FPA 249-3 Selected Topics in Music I
CMNS 258-3 Introduction to Electroacoustic Communication
plus two FPA studio courses outside Music
plus one FPA theory or history course outside Music.

Upper Division Requirements
A minimum of 33 upper division credit hours must be completed. Fifteen credit hours must be chosen from the following.

FPA 338-3 Advanced Screenwriting
FPA 436-3 Advanced Seminar in Film and Video Studies*

plus one of
FPA 310-4 Interdisciplinary Methods
FPA 311-4 Interdisciplinary Studies in the Arts
FPA 312-3 Intermediate Seminar in Art and Culture
FPA 313-5 Arts, Audience, Patronage, Institutions
FPA 314-3 Readings in the History of Art and Culture
FPA 411-3 Interdisciplinary Studies in the Contemporary Arts
FPA 412-3 Advanced Seminar in Art and Culture Studies
FPA 414-3 Advanced Topic in the History of Art and Culture
FPA 416-3 Practices in Art and Culture or another upper division FPA history or critical course outside film.

*these courses may include studies in film and video analysis, national cinemas, genre, political cinema, etc. and may be repeated for credit when a different topic is offered
**recommended
Note: Courses devoted to film or video are occasionally offered by other departments. With prior permission, students may substitute one or more of these courses to fulfill requirements, up to a maximum of eight credit hours.

Simon Fraser University  2007 • 2008 Calendar
Theatre Major Program
The theatre program allows students to choose a performance stream or a production and design stream. Both programs are completed within a bachelor of fine arts – major in theatre program.

The performance stream emphasizes the development of an all-round theatre artist. The studio courses in theatre are supplemented by courses in dramatic literature, theatre history, playmaking, and technical theatre.

Courses chosen from disciplines outside theatre give the program an interdisciplinary component. Students are encouraged to participate in productions and to develop their own scripts and performance pieces. The production and design stream provides a path for students who wish to study theatre, but prefer to emphasize production and design aspects of the discipline.

Students whose interest in theatre is primarily historical, critical or theoretical are directed to the art and culture studies major program, leading to a BA.

Lower Division Requirements for the Performance Stream
Entry to FPA 250, 252, 254 and to the major in theatre (performance stream) is by audition, usually scheduled for early spring and late summer. Contact the general office to make an appointment.

A minimum of 41 credit hours must be completed including all of
- FPA 129-3 Fundamental Integration of Human Movement
- FPA 150-3 Introduction to Acting I
- FPA 151-3 Introduction to Acting II
- FPA 170-3 Introduction to Production Technology
- FPA 250-3 Acting I
- FPA 251-3 Acting II
- FPA 252-3 Playmaking I
- FPA 253-3 Playmaking II
- FPA 254-2 Theatre Laboratory I
- FPA 255-3 Theatre Laboratory II
- FPA 257-3 Context of Theatre I
- FPA 357-3 Context of Theatre II

plus two upper division FPA courses other than theatre.

Upper Division Requirements for the Production Stream
A minimum of 33 credit hours must be completed including all of
- FPA 350-3 Acting III
- FPA 351-3 Acting IV
- FPA 354-2 Theatre Laboratory III
- FPA 355-2 Theatre Laboratory IV
- FPA 357-3 Context of Theatre II

plus an additional 20 credit hours of upper division credit. Please note that no more than eight upper division credit hours from outside FPA may be used toward the major.

Lower Division Requirements for the Production and Design Stream
Entry to FPA 270 and/or 271 to the major in theatre (production and design stream) is by interview, usually scheduled for early spring and late summer. Contact the general office to make an appointment.

Students who wish to enroll in the theatre production and design stream major normally take FPA 170, 171 and 150, and are advised to take other courses required for the major prior to interviewing for entry into the program.

Students complete a minimum of 39 credit hours including all of
- FPA 147-3 Introduction to Electroacoustic Music
- FPA 150-3 Introduction to Acting I
- FPA 150-3 Introduction to Production Technology
- FPA 171-3 Introduction to Stage and Production Management
- FPA 270-3 Production Ensemble I
- FPA 271-3 Production Ensemble II
- FPA 272-3 Production Practicum I
- FPA 273-3 Production Practicum II

plus one of
- FPA 120-3 Introduction to Contemporary Dance
- FPA 124-3 Dance Improvisation
- FPA 125-3 Fundamental Integration of Human Movement
- FPA 226-3 Dancing in Cyberspace

plus three credit hours from any lower division FPA theory or history course outside of Theatre.

plus three credit hours from any lower division FPA studio course outside of Theatre.

Upper Division Requirements for the Production and Design Stream
A minimum of 39 credit hours including all of
- FPA 357-3 Context of Theatre II
- FPA 370-3 Production Ensemble III
- FPA 371-3 Production Ensemble IV
- FPA 374-3 Stage Lighting
- FPA 375-3 Stage Design

plus a minimum of nine credit hours of Production and Design Practicum from
- FPA 372-3 Production Practicum III
- FPA 373-3 Production Practicum IV
- FPA 472-3 Production Practicum V
- FPA 473-5 Production Practicum VI

plus one of
- FPA 365-3 Special Project in Dance Composition
- FPA 352-3 Playmaking III
- FPA 353-3 Playmaking IV
- FPA 450-3 Advanced Studio Skills
- FPA 453-3 Theory and Practice of Directing
- FPA 457-3 Context of Theatre III
- FPA 470-3 Production Ensemble V
- FPA 471-3 Production Ensemble VI
- FPA 489-5 Interdisciplinary Project in FPA

plus 12 credit hours of upper division FPA courses which may be drawn from any of the above or from other available FPA offerings. At least three of these credit hours must be from an FPA theory or history course outside of Theatre.

Theatre Extended Minor
This program is for students interested in technical, design and administrative aspects of theatre. Interdisciplinary requirements place theatre study in the context of contemporary art theory and practice.

Lower Division Requirements
A minimum of 30 credit hours must be completed including all of
- FPA 150-3 Introduction to Acting I
- FPA 150-3 Introduction to Production Technology
- FPA 171-3 Introduction to Stage and Production Management
- FPA 257-3 Context of Theatre I
- FPA 270-3 Production Ensemble I
- FPA 271-3 Production Ensemble II
FPA 272-3 Production Practicum I
FPA 273-3 Production Practicum II
plus three credit hours from any lower division FPA theory or history course outside of Theatre
plus three credit hours from any lower division FPA studio course outside of Theatre.

Upper Division Requirements
A minimum of 18 credit hours must be completed including all of
FPA 357-3 Context of Theatre II
FPA 374-3 Stage Lighting
FPA 375-3 Stage Design
plus one of
FPA 370-3 Production Ensemble III
FPA 371-3 Production Ensemble IV
plus one of
FPA 372-3 Production Practicum III
FPA 373-3 Production Practicum IV
plus one of
FPA 311-4 Interdisciplinary Studies in the Arts
FPA 313-5 Arts, Audience, Patronage, Institutions
FPA 325-3 Special Projects in Dance Composition
FPA 353-3 Playwriting IV
FPA 470-3 Production Ensemble V
FPA 471-3 Production Ensemble VI
FPA 389-3 Selected Topics in the Fine and Performing Arts II
or any other upper division FPA history or theory course outside of Theatre.

Visual Art Major Program
The bachelor of fine arts – major in visual art prepares students to become practicing artists. A combination of broad-based practical studio courses in conjunction with theoretical and historical seminars allows students to understand their own production in relation to current developments in visual art and other disciplines. A strong emphasis is placed on developing an understanding of the position and responsibilities of the artist in contemporary society.

Entry to the visual art major (BFA) program is granted after completion of FPA 111, 160, 161 and 168 in the first year followed by an application to FPA 260. Following the completion of FPA 260, 261 and 210 entry to the visual art major is granted based on an application. Both applications are determined by grades and portfolio assessment, usually scheduled at the end of the spring term. Contact the general office for further information.

Methods and Concepts courses are offered simultaneously as upper and lower division courses; with the exception of FPA 269/369, they may only be taken once for credit, either as a lower division course or an upper division course, but not both.

The attention of students whose interest in visual art is related primarily to its historical, critical, or theoretical aspects, is directed to the art and culture studies major program, leading to a BA degree.

Lower Division Requirements
A minimum of 39 credit hours must be completed including all of
FPA 111-3 Issues in the Fine and Performing Arts
FPA 160-3 Introductory Studio in Visual Art I
FPA 161-3 Introductory Studio in Visual Art II
FPA 167-3 Visual Art and Culture I
FPA 168-3 Visual Art and Culture II
FPA 210-3 Artsworks, Theories, Contexts
FPA 260-3 Studio in Visual Art I
FPA 261-3 Studio in Visual Art II
two of
FPA 262-3 Methods and Concepts: Drawing Practices
FPA 263-3 Methods and Concepts: Painting Practices
FPA 264-3 Methods and Concepts: Sculptural Practices
FPA 265-3 Methods and Concepts: Spatial Presentation
FPA 266-3 Methods and Concepts: Selected Topics*
plus six additional credit hours in lower division FPA courses outside of visual art. One must be a history or theory course, and one must be a studio.

Upper Division Requirements
A minimum of 35 credit hours must be completed including all of
FPA 360-3 Studio in Visual Art III
FPA 361-3 Studio in Visual Art IV
FPA 366-3 Seminar in Visual Art I
FPA 367-3 Seminar in Visual Art II
FPA 460-3 Studio in Visual Art V
FPA 461-5 Studio in Visual Art VI
plus two of
FPA 362-3 Methods and Concepts: Drawing Practices
FPA 363-3 Methods and Concepts: Painting Practices
FPA 364-3 Methods and Concepts: Sculptural Practices
FPA 365-3 Methods and Concepts: Photographic Practices
FPA 368-3 Methods and Concepts: Spatial Presentation
FPA 369-3 Methods and Concepts: Selected Topics*
plus nine FPA upper division credit hours including one history/theory course.

*may be taken more than once for credit under a different topic. Topics may change every term and include, but are not limited to, installation practices, performance practices, digital 2D practices, and time-based media practices. Contact the general office for further information.

Visual Art Extended Minor
This extended minor may be of interest to students who wish to obtain a BA degree by completing two extended minors. The program offers a balanced selection of studio, history and theory courses in the visual art area, giving students a good introduction to contemporary art issues and practices. Students may use this extended minor for the purpose of teaching in the schools.

Entry to the Visual Art Extended Minor program, after completion of FPA 111, 160, 161 and 168 in the first year, is determined by grades and portfolio assessment, usually scheduled at the end of the spring term. Contact the general office for further information.

Methods and Concepts courses are offered simultaneously as upper and lower division courses; with the exception of FPA 269/369, they may only be taken once for credit, either as a lower division course or an upper division course, but not both.

Lower Division Requirements
A minimum of 30 credit hours must be completed including all of
FPA 111-3 Issues in the Fine and Performing Arts
FPA 160-3 Introductory Studio in Visual Art I
FPA 163-3 Methods and Concepts: Painting Practices
FPA 164-3 Methods and Concepts: Sculptural Practices
FPA 165-3 Methods and Concepts: Photographic Practices
FPA 166-3 Methods and Concepts: Spatial Presentation
FPA 167-3 Visual Art and Culture I
FPA 168-3 Visual Art and Culture II
FPA 210-3 Artsworks, Theories, Contexts
FPA 260-3 Studio in Visual Art I
FPA 261-3 Studio in Visual Art II
two of
FPA 262-3 Methods and Concepts: Drawing Practices
FPA 263-3 Methods and Concepts: Painting Practices
FPA 264-3 Methods and Concepts: Sculptural Practices
FPA 265-3 Methods and Concepts: Spatial Presentation
FPA 266-3 Methods and Concepts: Selected Topics*
FPA 267-3 Methods and Concepts: Photographic Practices
FPA 268-3 Methods and Concepts: Spatial Presentation
FPA 269-3 Methods and Concepts: Selected Topics*
Upper Division Requirements
A minimum of 15 credit hours must be completed including two of
FPA 362-3 Methods and Concepts: Drawing Practices
FPA 363-3 Methods and Concepts: Painting Practices
FPA 364-3 Methods and Concepts: Sculptural Practices
FPA 365-3 Methods and Concepts: Photographic Practices
FPA 368-3 Methods and Concepts: Spatial Presentation
FPA 369-3 Methods and Concepts: Selected Topics*
Upper Division Requirements
A minimum of 39 credit hours must be completed including all of
FPA 360-3 Studio in Visual Art III
FPA 361-3 Studio in Visual Art IV
FPA 366-3 Seminar in Visual Art I
FPA 367-3 Seminar in Visual Art II
FPA 460-3 Studio in Visual Art V
FPA 461-5 Studio in Visual Art VI
plus two of
FPA 362-3 Methods and Concepts: Drawing Practices
FPA 363-3 Methods and Concepts: Painting Practices
FPA 364-3 Methods and Concepts: Sculptural Practices
FPA 365-3 Methods and Concepts: Photographic Practices
FPA 368-3 Methods and Concepts: Spatial Presentation
FPA 369-3 Methods and Concepts: Selected Topics*
plus nine FPA upper division credit hours including one history/theory course.

*may be taken more than once for credit under a different topic. Topics may change every term and include, but are not limited to, installation practices, performance practices, digital 2D practices, and time-based media practices. Contact the general office for further information.

Minor Program
In addition to the many, previously mentioned, extended minor programs that culminate in the award of the Bachelor of Fine and Performing Arts degree, the school also offers the Fine and Performing Arts Minor. This minor can be completed by students who are pursuing a major in the school, or in any other Simon Fraser University department that offers a major.

Fine and Performing Arts Minor
The FPA minor program accommodates a wide range of interests in the fine and performing arts, but some exposure to both the practical and the theoretical aspects of art is assured by the studio course requirement at the lower division and the seminar in art and culture studies at the upper division.

Lower Division Requirements
A minimum of 12 credit hours in FPA must be completed including one studio course.

Upper Division Requirements
A minimum of 15 credit hours in FPA must be completed including at least three credit hours in upper division theory and history courses.

Joint Major Program
Joint Major in Anthropology or Sociology, and Art and Culture Studies
These joint majors are interdisciplinary programs that link the study of contemporary arts with the social sciences. Students explore interrelationships between fine, performing and media arts, cultural criticism, intercultural relations, and social, economic or political processes. Alternatively, they may choose courses that pertain to one or two areas in particular.
Art and Culture Studies Lower Division Requirements
Students must complete 18 credit hours as follows.
- one of FPA 167-3 Visual Art and Culture I
- FPA 168-3 Visual Art and Culture II
- one of FPA 136-3 History and Aesthetics of Cinema I
- FPA 137-3 History and Aesthetics of Cinema II
- plus FPA 210-3 Artworks, Theories, Contexts

Additional Disciplinary History Courses
Students must complete at least six credit hours of lower division disciplinary history or theory courses from within the School for the Contemporary Arts.

Studio Courses
Students must complete three to six credit hours of lower division studio courses from within the School for the Contemporary Arts.

Note: For some studio courses, permission to enroll is selective and may be based on an interview or audition. Contact the school for more detail regarding specific studio courses.

Art and Culture Studies Upper Division Requirements
Students are required to complete 20 credit hours as follows.

Interdisciplinary Theory Core
Students must complete FPA 310-4 Interdisciplinary Methods plus a minimum of 16 credit hours chosen from FPA 311-4 Interdisciplinary Studies in the Arts, FPA 312-3 Intermediate Seminar in Art and Culture, FPA 313-3 Arts, Audience, Patronage, Institutions, FPA 314-3 Readings in the History of Art and Culture, FPA 337-3 Intermediate Selected Topics in Film and Video Studies, FPA 390-3 Video Production II, FPA 393-2 Techniques of Video

FPA 411-3 Interdisciplinary Studies in the Contemporary Arts
FPA 412-4 Advanced Seminar in Art and Culture*
FPA 414-3 Advanced Topic in the History of Art and Culture*
FPA 416-3 Practices in Art and Culture*
FPA 436-3 Advanced Seminar in Film and Video Studies

Note: Some courses have prerequisites beyond those that can be applied to the joint major program requirements

Anthropology Lower Division Requirements
Students complete 20 credit hours including all of SA 101-4 Introduction to Anthropology (A)
SA 245-4 Cultures and Images (A)
SA 255-4 Introduction to Social Research (SA)
and eight additional credit hours at the 200 division chosen from the following.

SA 201-4 Anthropology of Contemporary Life (A)
SA 203-4 Comparative Ethnic Relations (SA)
SA 216-4 Illness, Culture and Society (SA)
SA 263-4 Peasants, Protestants and the Global Economy (A)
SA 286-4 Aboriginal Peoples and British Columbia: Introduction (A)
SA 293-4 Special Topics in Anthropology (A)
SA 294-4 Special Topics in Anthropology and Sociology**
WS 200-3 Women in Cross-Cultural Perspective
*highly recommended
**applicable only when the topic is anthropology

Anthropology Upper Division Requirements
Students must complete 20 credit hours including both of
SA 301-4 Contemporary Ethnography (A)
SA 356-4 Ethnography and Qualitative Methods (SA)
and 12 additional credit hours chosen from
SA 303-4 Indigenous Studies (A)
SA 316-4 Tourism and Social Policy (SA)
SA 318-4 The Anthropology of Medicine (A)
SA 319-4 Culture, Ethnicity and Aging (SA)
SA 320-4 Population and Society (SA)
SA 323-4 Symbol, Myth and Meaning (A)
SA 332-4 The Archaeology of Childhood (A)
SA 340-4 Social Issues and Social Policy Analysis (SA)
SA 345-4 Issues in Canadian Ethnic Relations (SA)
SA 360-4 Special Topics in Sociology and Anthropology (SA)**
SA 363-4 Processes of Development and Underdevelopment (SA)
SA 364-4 Urban Communities and Cultures (SA)
SA 365-4 Selected Regional Areas (SA)
SA 371-4 The Environment and Society (SA)
SA 374-4 South Africa: Socio-Political Development (SA)
SA 386-4 Native Peoples and Public Policy (SA)
SA 387-4 Canadian Native Peoples (SA)
SA 388-4 Comparative Studies of Minority Indigenous Peoples (SA)
SA 400-4 Canadian Ethnic Minorities (SA)
SA 402-4 The Practice of Anthropology (A)
SA 447-4 Selected Issues in Social Policy Analysis (SA)
SA 451-4 Issues in Anthropological Theory (A)
SA 455-4 Special Topics in Applied Social Research (SA)
SA 460-4 Special Topics in Sociology and Anthropology (SA)**
SA 463-4 Special Topics in Development Studies (SA)
SA 472-4 Anthropology and the Past (A)
SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar (A)
SA 496-4 Directed Readings in Anthropology (A)
*highly recommended
**applicable only when the topic is anthropology

Sociology Lower Division Requirements
Students complete 19 credit hours including all of
SA 150-4 Introduction to Sociology (S)
SA 250-4 Introduction to Sociological Theory (S)
SA 255-4 Introduction to Social Research (SA)
STAT 203-3 Introduction to Statistics for the Social Sciences
plus four credit hours chosen from
SA 202-4 Post-Industrial Societies (S)
SA 203-4 Comparative Ethnic Relations (SA)
SA 216-4 Sociology of Leisure (S)
SA 231-4 The Sociology of Domestic Life (S)
SA 260-4 Individual and Society (S)
SA 292-4 Special Topics in Sociology (S)
SA 294-4 Special Topics in Sociology and Anthropology (SA)**
**applicable only when the topic is sociology

Sociology Upper Division Requirements
Students must complete 20 credit hours as follows, both of
SA 350-4 Classical Sociological Thought
SA 355-4 Quantitative Methods
plus an additional 12 credit hours chosen from
CMNS 334-4 Cultural Policy*
SA 300-4 Canadian Social Structure (SA)
SA 303-4 Ethnic Conflicts (SA)
SA 304-4 Social Control (S)
SA 316-4 Tourism and Social Policy (SA)
SA 319-4 Culture, Ethnicity and Aging (SA)
SA 320-4 Population and Society (SA)
SA 321-4 Social Movements (S)
SA 322-4 Sociology of Religion (S)
SA 325-4 Political Sociology (S)
SA 326-4 Ecology and Social Thought (S)
SA 327-4 Sociology of Knowledge (S)
SA 333-4 Schooling and Society (S)
SA 335-4 Gender Relations and Social Issues (S)
SA 340-4 Social Issues and Social Policy Analysis (SA)**
SA 345-4 Issues in Canadian Ethnic Relations (SA)
SA 351-4 Classical Marxist Thought (SA)
SA 357-4 Survey Methods (SA)*
SA 360-4 Special Topics in Sociology and Anthropology (SA)**
SA 362-4 Society and the Changing Global Division of Labor (S)
SA 363-4 Processes of Development and Underdevelopment (SA)
SA 364-4 Urban Communities and Cultures (SA)
SA 365-4 Selected Regional Areas (SA)
SA 371-4 The Environment and Society (SA)
SA 374-4 South Africa: Socio-Political Development (SA)
SA 400-4 Canadian Ethnic Minorities (SA)
SA 416-4 Sociology of Art Forms (S)
SA 420-4 Sociology of Aging (SA)
SA 447-4 Selected Issues in Social Policy Analysis (SA)
SA 450-4 Advanced Sociological Theory (S)
SA 455-4 Special Topics in Applied Social Research (SA)
SA 460-4 Special Topics in Sociology and Anthropology (SA)**
SA 463-4 Special Topics in Development Studies (SA)
SA 497-4 Directed Readings in Sociology (S)
*highly recommended
**applicable only when the topic is sociology

Praxis Centre for Screenwriters
Suite 3120, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.7880 Tel, 778.782.7882 Fax, www.praxisfilm.com

Director
P. Gruben BA (Rice)

Praxis is a professional development workshop for screenwriters and filmmakers. Intensive non-credit workshops are held twice a year for writers whose feature film scripts have been chosen through a national competition. In addition, Praxis offers public seminars throughout the year and maintains a reference library of film scripts and other materials related to film production and studies.

School of Criminology
10125 Arts and Social Sciences Complex 1, 778.782.3213 Tel, 778.782.4140 Fax, www.sfu.ca/criminology, ugracrim@sfu.ca

Director
R.M. Gordon BA (La Trobe), MA (S Fraser), PhD (Br Col)

Professors Emeriti
E.A. Fattah LLL (Cairo), MA, PhD (Montre), FRSCCan
K. Faith BA, PhD (Calif)

Professors
N.T. Boyd BA (WOnt), LLB, LLM (Law Soc Upper Canada)
P.J. Brantingham AB, JD (Col)
P.L. Brantingham AB (Col), MA (Fordham), MSP, PhD (Florida State)
J. Brockman BA (Sask), MA (Alta), LLB (Calg), LLM (Br Col)
B. Burch BA (Qu), MA (Tori), PhD (Br Col)
R.R. Corrado BA (Mich), MA, PhD (Northwestern)
Understanding Individuals, Society, the System and the Law
Understanding the individual in society
Understanding human behavior
Understanding the criminal justice system
Understanding criminal behavior
Understanding the law
Understanding specific criminological problems

Learning the Techniques
Research methods and techniques
Techniques of intervention
Techniques of management, administration and planning
Relating theory to practice
Field Work
This interdisciplinary program and the wide variety of criminology courses and other behavioral and social sciences integrated within it, allow students to pursue an interest in a different sector of applied criminology: crime prevention, corrections, criminal law reform and social reform.

Enrolment Limitations
Admission Requirements
The school limits admission to the upper division of its major, minor and honors programs. Entry into these programs will be on the basis of a formal application made to the school as soon as the student has completed the requirements, for admission to upper division effective the following term. Students are eligible to apply for entry to the major/honors program after successful completion of 60 credit hours, including the lower division group A and B required courses. Students are eligible to apply for entry to the minor program after successful completion of 60 credit hours including CRIM 101, 131 and 135. Students should make application to the school immediately after they have completed the above requirements.

Continuation in Major, Honors or Minor
To continue in the major or minor programs, students must maintain a 2.25 CGPA. Students whose CGPA falls below 2.25 cannot enroll in any upper division CRIM courses including those offered through distance education. When it is restored to 2.25, students will be readmitted after review and approval of the director of undergraduate programs.

For honors continuance, a 3.00 CGPA must be maintained. Those with a lower CGPA cannot enroll in any upper division criminology courses and other behavioral and social sciences integrated within it, allow students to pursue an interest in a different sector of applied criminology: crime prevention, corrections, criminal law reform and social reform.

Appeal Procedure
Applicants denied admission to a criminology major/honors/minor may appeal in writing to the school’s director. If that appeal results in a negative decision, a written appeal to the dean of the Faculty of Arts and Social Sciences may be submitted. Appeals will be granted only in very exceptional circumstances.

Enrollment Priority
Enrollment priority for limited enrolment upper division seminar courses in the school will be established on the basis of cumulative GPA.

Transfer Students
Students transferring to Simon Fraser University from a two-year college that has articulated the first 60 credit hours of study in criminology with the School of Criminology will be considered on the basis of their college cumulative GPA (calculated on the basis of grades received in courses transferable to the University), as well as other relevant materials.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program
Students in the general degree program must complete a total of 120 credit hours (see “Major Program” on page 6 and the following requirements.)

Students majoring in criminology must obtain a minimum grade of C- in all required group A and group B courses.

Lower Division Requirements (normally the first 60 credit hours)
Students must complete 60 credit hours including the requirements set out below under Group A, Group B and general electives.

• eight courses from group A
• seven courses from group B
• an additional five courses of general electives

The Faculty of Arts and Social Sciences breadth requirements must be completed for graduation and the general electives should be considered for that purpose.

Students may not complete group B requirements other than those listed below unless permission is obtained from the school’s undergraduate curriculum committee prior to taking the course.

Group A Lower Division Requirements
For admission to the major program, students who have completed PSYC 201 with a C-grade or better may request a waiver from CRIM 220 by petitioning the undergraduate advisor. Only in exceptional cases will this waiver be granted, and if approved, an additional three credit hours of upper division criminology must be taken to replace CRIM 220.

Students are required to complete all CRIM 101-3 Introduction to Criminology
CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior
CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
CRIM 220-3 Research Methods in Criminology
CRIM 230-3 Criminal Law

plus one of
CRIM 203-3 Historical Reaction to Crime and Deviance
CRIM 210-3 Law, Youth and Young Offenders
CRIM 213-3 Introduction to Women and Criminal Justice
CRIM 215-3 Introduction to the Judicial Process
CRIM 241-3 Introduction to Corrections
CRIM 251-3 Introduction to Policing

Group B Lower Division Requirements
Students are required to complete seven courses, including all of
PSYC 101-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
SA 150-4 Introduction to Sociology

plus one of
POL 100-3 Introduction to Politics and Government
POL 151-3 The Administration of Justice

Simon Fraser University 2007 - 2008 Calendar
Group B Upper Division Requirements
An additional 12 required credit hours may be chosen from upper division courses in the following disciplines and/or from upper division criminology courses (excluding CRIM 301).

Note: Many upper division courses have prerequisites or enrollment restrictions, as shown in the Undergraduate Schedule of Classes and Examinations. If in doubt about your eligibility to enroll in a non-criminology course, contact the advisor in the appropriate department well in advance of any attempt to enroll.

Archeology (ARCH)
Business Administration (BUS)
Canadian Studies (CNS)
Communication (CMNS)
Computing Science (CMPT)
Economics (ECON and BUEC)
Education (EDUC)
English (ENGL)
Geography (GEOG)
Gerontology (GERO)
History (HIST)
Mathematics (MATH)
Philosophy (PHIL)
Political Science (POL)
Psychology (PSYC)
Sociology and Anthropology (SA)
Statistics (STAT)
Women's Studies (WS)

General Electives Lower Division Requirements
Students are required to complete the balance of the first 60 credit hours by choosing any other 100-200 division courses or the transfer equivalent thereof. Faculty of Arts and Social Sciences breadth requirements must be completed for graduation and general electives should be considered for that purpose.

Note: Declared criminology majors will normally complete all lower division group A and B requirements before proceeding to upper division. Students may proceed to upper division courses without having completed these lower division courses only with the express written approval of the criminology undergraduate curriculum and articulation committee.

Upper Division Requirement
Students must complete a minimum of 48 credit hours in courses as set out below.

Group A Upper Division Requirements
Students are required to complete a minimum of 36 credit hours including the following four courses.

CRIM 300-3 Current Theories and Perspectives in Criminology
CRIM 320-3 Quantitative Research Methods in Criminology
CRIM 321-3 Qualitative Research Methods in Criminology
CRIM 330-3 Criminal Procedure and Evidence

Plus a minimum of 24 credit hours from criminology upper division courses (excluding CRIM 301). Please see "Criminology CRIM" on page 363 for the listing of upper division criminology courses.

The remaining credit hours, to satisfy degree requirements, may be selected at the student's discretion. Faculty of Arts and Social Sciences breadth requirements must be completed for graduation; general electives should be considered for that purpose.

For program continuation, students must maintain a 3.0 cumulative GPA. Those whose CGPA falls below 3.0 cannot enroll in CRIM 499 and therefore cannot complete the program.

Minor in Criminology
Students must complete all of CRIM 101-3 Introduction to Criminology
CRIM 131-3 Introduction to the Criminal Justice System — a Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective

Students must have at least 18 other credit hours in criminology courses numbered 300 and above. A minimum C-grade in each of CRIM 100/101/102, 131 and 135 is also required.

Minor in Legal Studies
Lower Division Requirements
Students must complete a minimum of nine lower division credit hours including both CRIM 131-3 Introduction to Canadian Law and Legal Institutions
POL 151-3 The Administration of Justice

Students may proceed to upper division courses before proceeding to upper division.

Students must be careful to ensure they have the prerequisites or enrollment restrictions, as shown in the Undergraduate Schedule of Classes and Examinations. If in doubt about your eligibility to enroll in a non-criminology course, contact the advisor in the appropriate department well in advance of any attempt to enroll.

Honors Program
The School of Criminology has a structured honors program for its outstanding undergraduate students. The program dovetails with the criminology major and consists of two terms of advanced course work and supervised research. Honors students write and defend a short thesis. Students are admitted as a group each September, and must complete and defend their theses by the following April.

Students normally enter the program with a minimum of 110 credit hours (see below) but may enter with less and take one additional course during the first term with permission of the director of undergraduate studies. Students complete a minimum of 120 credit hours with GPAs in accordance with general and Faculty of Arts and Social Sciences graduation requirements including a minimum CGPA of not less than 3.00 (3.50 for first class honors).

See “Honors Program” on page 6 and “Grade Point Averages Needed for Graduation” on page 35.

Admission Requirements
Eligible students should apply to the undergraduate program director. The selection process normally happens each spring for September admission.

Lower Division Requirements
Lower division requirements are the same as for the major in criminology.

Upper Division Requirements
Students must complete a minimum of 72 credit hours as follows: a minimum of 60 credit hours from criminology and/or group B courses numbered 300 and above. Of these 60 hours, a minimum of 50 credit hours must be selected from upper division criminology and must include CRIM 300, 320, 321, 330, 490, 491 and 499.

The remaining credit hours, to satisfy degree requirements, may be selected at the student's discretion. Faculty of Arts and Social Sciences breadth requirements must be completed for graduation; general electives should be considered for that purpose.

For program continuation, students must maintain a 3.0 cumulative GPA. Those whose CGPA falls below 3.0 cannot enroll in CRIM 499 and therefore cannot complete the program.
CRIM 437-3 Crime and Misconduct in the Professions
ECON 388-3 Introduction to Law and Economics
EDUC 445-4 Legal Context of Teaching
EDUC 446-4 Law for the Classroom Teacher
EDUC 448-4 Law in the Curriculum
HIST 312-4 Poverty, Crime and Madness, Society and the Outcast
PHIL 320-3 Social and Political Philosophy
PHIL 321-3 Moral Issues and Theories
POL 324-4 The Canadian Constitution
POL 344-4 Public International Law
POL 346-4 International Organizations
POL 351-4 The Public Policy Process
POL 355-4 Governing Instruments
POL 417-4 Human Rights Theories
POL 459-4 Selected Topics in Governance
PSYC 369-3 Law and Psychology
PSYC 469-4 Selected Topics in Psychologcal Issues
WS 303-4 Special Topics in Women's Studies**

*when offered as a legal topic
**when offered as the topic Women and the Law

Check with the school for additional relevant courses.

Extended Minor Program
This program consists of the lower division requirements for a major and the upper division requirements for a minor. Certain other criteria may be set by individual departments and programs. A student must have their program approved by the advisor for the extended minor program.

Joint Major in Criminology and Canadian Studies
A joint major with the School of Criminology and the Centre for Canadian Studies is available. Students must complete all requirements for a criminology major and a Canadian studies major. Any lower division course that counts toward the separate requirements for Canadian studies and for criminology may be counted towards both. Up to 12 upper division credit hours in both Canadian studies and criminology may be counted toward the upper division credit hour requirements of both. A joint major in Canadian studies and criminology that also specifies 30 upper division credit hours will therefore require a total of 48 upper division credit hours in the two subjects (30 Canadian studies plus 30 criminology minus 12 overlap). Joint major students are required to complete all the key courses listed for the department in which they are pursuing the other major.

Joint Major in Criminology and Psychology

Program Requirements
This program explores relationships between the study of criminology and psychology. Students should consult advisors in both departments.

Students must satisfy the admission requirements for both criminology and psychology major programs and have School of Criminology approval before being approved by the Department of Psychology. To continue in the joint major, students must maintain a 2.25 CGPA and cannot enroll in upper division criminology courses with a CGPA of less than 2.25. However, a student whose CGPA is between 2.00 and 2.25 may be eligible for a major in psychology.

Students who take CRIM 220 must obtain a Department of Psychology waiver of the PSYC 201 prerequisite for PSYC 210 and all 300/400 division PSYC courses, in advance of attempting to enroll for any of these courses. Students who take PSYC 201 must obtain from the criminology advisor a waiver of the CRIM 220 prerequisite for CRIM 320, in advance of attempting to enroll for this course.

Criminology Requirements
Group A Lower Division Requirements
Students must complete all of
CRIM 101-3 Introduction to Criminology
CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior
plus all of
CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
CRIM 230-3 Criminal Law
plus one of
CRIM 203-3 Historical Reaction to Crime and Deviance
CRIM 210-3 Law, Youth, and Young Offenders
CRIM 213-3 Introduction to Women and Criminal Justice
CRIM 231-3 Introduction to the Judicial Process
CRIM 241-3 Introduction to Corrections
CRIM 251-3 Introduction to Policing

Group B Lower Division Requirements
SA 150-4 Introduction to Sociology
plus one of
POL 100-3 Introduction to Politics and Government
POL 151-3 The Administration of Justice
plus one of
PHIL 001-3 Critical Thinking
PHIL 100-3 Knowledge and Reality
PHIL 110-3 Introduction to Logic and Reasoning
PHIL 120-3 Introduction to Moral Philosophy
PHIL 150-3 History of Philosophy I
PHIL 151-3 History of Philosophy II
PHIL 220-3 Introduction to Social and Political Philosophy
PHIL 244-3 Introduction to the Philosophy of Natural and Social Science
PHIL 280-3 Introduction to Existentialism

Upper Division Requirements
all of
CRIM 300-3 Current Theories and Perspectives in Criminology
CRIM 320-3 Quantitative Research Methods in Criminology
CRIM 330-3 Criminal Procedure and Evidence
plus a minimum of 12 credit hours of upper division criminology group A courses (excluding CRIM 369 and 462) and six credit hours of upper division non-criminology (group B) courses other than psychology.

Psychology Requirements
Lower Division Requirements
all of
PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
PSYC 207-3 Introduction to the History of Psychology
PSYC 210-4 Introduction to Data Analysis in Psychology
PSYC 210-4 Introduction to Data Analysis in Psychology
plus one of
CRIM 220-3 Research Methods in Criminology
PSYC 201-4 Introduction to Research Methods in Psychology
*students must obtain a final course grade of C (2.0) or better in each of these courses.

Required Courses
CRIM 101-3 Introduction to Criminology
PSYC 253-3 Introduction to Developmental Psychology
PSYC 256-3 Introduction to Social Psychology
PSYC 268-3 Introduction to Law and Psychology
PSYC 270-3 Introduction to Theories of Personality

Upper Division Requirements
Students must complete 21 credit hours in upper division psychology courses. No more than three of these credit hours may be in directed studies. At least 11 upper division psychology credit hours must be taken at Simon Fraser University.

Joint Major in Sociology or Anthropology and Criminology
See “Joint Major in Sociology or Anthropology and Criminology” on page 183.

Joint Major in Women’s Studies and Criminology
See “Joint Major in Criminology and Women’s Studies” on page 188 for requirements.

Certificate Programs
Advisor
(to be announced), 2644 Diamond Building, 778.782.3645

The University offers two criminology certificate programs: the general certificate in criminology and the advanced certificate in criminology. Both certificates are primarily directed toward undergraduates and criminal justice professionals, but are open to all. Those who hold a bachelor’s degree (in any field of study) should refer to the post baccalaureate diploma in criminology.

The certificates are not designed to satisfy specific employment credentials. Rather, the general certificate provides a basic theoretical and descriptive criminology foundation, and the advanced certificate program provides an in-depth understanding of criminology through more intensive study.

These certificate program courses are offered through the Centre for Distance Education to assist students in understanding the complexities of illegal behaviors, as well as society’s reactions.

Admission Requirements
Applicants must meet undergraduate admission deadlines as set out in this Calendar. Application forms, accompanied by official documents, must be submitted to Student Services. In addition to applying for University admission, all new students must apply in writing to the advisor in the School of Criminology for admission to the certificate programs.

General Certificate

Program Requirements
- successful completion of 60 credit hours, including the required courses as listed below
- a minimum grade of C- in each of the courses required for the certificate
- the majority of criminology courses must be completed through the Centre for Distance Education
- completion of the certificate within five years of admission to the program

Required Courses
CRIM 101-3 Introduction to Criminology
CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior

plus all of
CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
CRIM 220-3 Research Methods in Criminology
CRIM 230-3 Criminal Law
PHIL 110-3 Introduction to Logic and Reasoning
POL 151-3 The Administration of Justice
PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
SA 150-4 Introduction to Sociology
STAT 101-3 Introduction to Statistics

The remaining credit hours must be selected from specific groups of optional courses as follows.

• one course must be chosen from group A
• two courses must be chosen from group B
• the balance may be satisfied with courses chosen from groups A, B or C

Optional Courses
Group A
Students may choose from any of the remaining 100 and 200 division criminology distance education courses, such as
CRIM 213-3 Introduction to Women and Criminal Justice
CRIM 241-3 Introduction to Corrections
CRIM 251-3 Introduction to Policing

Group B
Students may choose from any 100 and 200 division distance education courses from the group B disciplines, such as
archaeology (ARCH)
business administration (BUS)
Canadian studies (CNS)
communication (CMNS)
computing science (CMPT)
economics (ECON and BUEC)
education (EDUC)
English (ENGL)
geography (GEOG)
history (HIST)
mathematics (MATH)
philosophy (PHIL)
political science (POL)
psychology (PSYC)
sociology and anthropology (SA)
statistics (STAT)

women's studies (WS)

Group C
Any lower division courses offered at Simon Fraser University or which transfer from another post-secondary institution (including the Open Learning Agency) to the equivalent of 100-200 division Simon Fraser University courses.

Note: Students enrolled at Simon Fraser University must obtain prior permission of Student Services by completing the letter of permission form.

Advanced Certificate

Program Requirements
• completion of Simon Fraser University’s general criminology certificate, or two years (equivalent to 60 Simon Fraser University credit hours) of accredited course work at a university or community college, or completion of a criminology certificate or diploma from a BC regional college prior to entering the advanced certificate program

Note: Students without a criminology certificate or diploma must take CRIM 101, 131 and 135, and obtain at least C- in each.
• successful completion of 18 credit hours from criminology courses numbered 300/400 (refer to the group A criminology courses in the criminology major program section)
• The majority of courses must be completed through distance education (consult the Centre for Distance Education for a list of criminology distance education courses)
• completion of the certificate within five years of admission to the program.

Post Baccalaureate Diploma Programs

Advisor

(to be announced), 2644 Diamond Building, 778.782.3645

This program is for students who hold a bachelor’s degree in a discipline other than criminology to expand their knowledge of criminology through a recognized program. Students pursue individual interests in specific criminology areas. The program is available through distance education, at the Burnaby and Vancouver campuses.

For information about post baccalaureate diploma program general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Post Baccalaureate Diploma in Criminology

Program Requirements
• completion of lower division prerequisite courses CRIM 101, 131 and 135
• successful completion of an approved program comprised of 30 credit hours of third and fourth year courses.
• of the 30 credit hours, a minimum of 15 must come from criminology courses numbered 300/400 and the remaining from any upper division on campus or distance education courses, or a combination of both
• minimum 2.5 GPA on courses applied toward the diploma
• completion of the diploma within five years of admission to the program

For information, contact the advisor in criminology.

Application Deadlines

Written application for program admission must be received by the advisor no later than
February 1 (summer term admission)
April 30 (fall term admission)
September 30 (spring term admission)

Students must make separate application for admission to the University, in accordance with University deadlines for the appropriate term. Applications received by the School of Criminology after the deadline will be considered only if resources permit following consideration of those applications received on time.

Post Baccalaureate Diploma in Legal Studies

Program Requirements

Students complete an approved program of 30 upper division credit hours, ensuring that they have the necessary lower division prerequisites for all courses in which they enrol.

Students complete both of
CRIM 332-3 Sociology of Law
CRIM 338-3 Philosophy of Law

In addition, students select one of the following concentrations and complete all of the courses listed.

Criminal Law
CRIM 310-3 Young Offenders and Criminal Justice: Advanced Topics
CRIM 314-3 Mental Disorder, Criminality and the Law
CRIM 330-3 Criminal Procedure and Evidence
CRIM 331-3 Advanced Criminal Law
CRIM 335-3 Human Rights and Civil Liberties

Women and Law
CRIM 333-3 Women, Law and the State
CRIM 335-3 Human Rights and Civil Liberties
CRIM 432-3 Gender in the Courts and the Legal Profession
WS 303-4 Special Topics in Women’s Studies*

*when offered as the topic Women and the Law

Psychology and the Law
PSYC 369-3 Law and Psychology
PSYC 469-4 Selected Topics in Psychosocial Issues

CRIM 314-3 Mental Disorder, Criminality and the Law
CRIM 435-3 Adult Guardianship Law

Education and Law
EDUC 445-4 Legal Context of Teaching
EDUC 448-4 Law in the Curriculum
EDUC 446-4 Law for the Classroom Teacher

Business, Economics and the Law
BUEC 391-3 Law in the Economic System
BUEC 472-3 Industrial Organization: Law and Economics
BUS 393-3 Commercial Law
ECON 389-3

Fundamental Rights and Law
CRIM 335-3 Human Rights and Civil Liberties
PHIL 320-3 Social and Political Philosophy (or 321)
POL 324-4 Canadian Constitution
POL 417-4 Human Rights Theories

To bring the total to 30 credit hours, students choose additional courses from the Minor in Legal Studies Program electives course list (see “Minor in Legal Studies” on page 148). Exemptions and replacement courses for required courses may be granted by the criminology associate director who is responsible for undergraduate programs.

Co-operative Education

Program Requirements

This program is offered to qualified students who want practical criminology experience. The program entails planned terms of study and employment in the area of the student’s choice. To be admitted, students must have completed 30 credit hours, including all of
CRIM 101-3 Introduction to Criminology
CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior
CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
CRIM 220-3 Research Methods in Criminology

plus one of
PSYC 210-4 Data Analysis in Psychology
STAT 100-3 Chance and Data Analysis
STAT 101-3 Introduction to Statistics
STAT 203-3 Introduction to Statistics for the Social Sciences

Simon Fraser University 2007 - 2008 Calendar
Admission Requirements

Major, honors and minor program admission (including joint honors and joint majors) is limited. Entry is on the basis of a formal department application. To be considered, students must have completed lower division required courses with at least a C-grade.

On recommendation of the department and the Office of the Dean of Arts and Social Sciences, the University establishes a yearly quota — the number of students to be admitted into major, honors, and minor programs. This quota is based on projected available course space and department resources. The department announces the minimum CGPA below which students will not normally be considered.

Students apply for admission to the major, minor or honors programs after completing 45 credit hours and have a 2.75 minimum CGPA. Transfer students in Economics programs to upper division courses is available to all students meeting the prerequisites for any course to be accepted in a student’s program in Economics (i.e., major, joint major, honors, joint honors or minor). A student must have obtained a grade of C-or higher in Economics. They may count for credit in either Business Administration and the Department of Political Science, Geography (environmental specialty) and Latin American Development Studies. A minor program is offered for students who are majoring or taking honors programs in disciplines other than economics.

Non-Majors Access to Courses

Lower Division

Access to lower division economics and BUED courses is available to all students meeting the prerequisites.

Upper Division ECON Courses

Non-majors who meet the current CGPA entrance requirements have the same access as approved students in Economics programs to upper division economics courses.

Upper Division BUED courses

Non-majors who meet the current CGPA entrance requirements have the same access as approved students in Economics and Business programs to upper division BUED courses.

Exchange and Visiting Students

Exchange and visiting students must obtain approval from the Department of Economics prior to enrolling in upper division ECON/BUED courses.

Course Information

For a course to be accepted as fulfilling a prerequisite, or for a required course to be accepted in a student’s Economics program, a grade of C- or higher must be obtained.

BUEC courses are offered jointly by the Faculty of Business Administration and the Department of Economics. They may count for credit in either Business Administration or Economics programs, but not for both. A student may not receive credit for both BUEC courses and (former) ECON/COMM courses which have the same number.

Requirements for the BA Degree

All majors and honors students must meet BA degree requirements for either the honors or general program as described in the Faculty of Arts and Social Sciences section. Students should fulfill Faculty requirements early in their programs and obtain broadly based backgrounds before entering upper division courses. Major and honors students must complete lower division requirements in the first 60 credit hours prior to program acceptance (including joint programs).

For a course to be accepted as fulfilling a prerequisite, or for a required course to be accepted in an Economics program (i.e., major, joint major, honors, joint honors or minor), a student must have obtained a grade of C- or higher.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program

Lower Division Requirements

Students must complete the following courses with at least a C- prior to admission to the major program.

BUEC 232-4 Data and Decisions I
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MATH 157-3 Calculus for the Social Sciences I (or equivalent)
Two 200 division ECON or BUEC courses (in addition to BUEC 232)

Students who earn at least an A- in both ECON 103 and 105 are exempt from the requirement of two 200 division ECON or BUEC courses. These students should see Early Access to Upper Division Courses below for additional program information.

Plus:
- one 000, 100 or 200 division English or philosophy course
- and one 100 or 200 division history or political science course
- and one 000, 100 or 200 division sociology/anthropology or psychology course
- and one 100 or 200 division biological sciences, chemistry or physics course

Upper Division Requirements

Normally, majors will include 45 credit hours of upper division credit in their last 60 credit hours of work toward the degree.

At least 30 credit hours of upper division credit in economics is required, including:
- BUEC 333-4 Statistical Analysis of Economic Data
- ECON 301-4 Microeconomic Theory I: Competitive Behavior
- ECON 302-4 Microeconomic Theory II: Strategic Behavior
- ECON 305-5 Intermediate Macroeconomic Theory

and at least one 400 division ECON or BUEC course (excluding ECON 402, 403, 431 and 435, BUEC 433 and 448).

Early Access to Upper Division Courses

Students normally cannot enter ECON upper division courses during the first 60 credit hours, but for those who have the minimum Simon Fraser University grade point average required to access upper division ECON/BUEC courses, the following exceptions are permitted.

Students who earn a grade of A- or better at Simon Fraser University on their first attempt in ECON 103 and 105 may enroll for ECON 301 and 305, and all courses for which they have satisfied the prerequisites, once 30 credit hours is completed.

Students who earn a grade of A- or better at Simon Fraser University on their first attempt in BUEC 232 or STAT 270 may enroll for BUEC 333 once they have completed 30 credit hours.

These upper division courses will count towards Department of Economics and Simon Fraser University upper division requirements. See individual course descriptions for access information.

Advanced Upper Division Courses

Access to ECON 402, 403, 435 and 499 is restricted to students who have excelled in their studies (see "Economics ECON" on page 371 for individual course description details). These advanced courses are recommended for students wishing to pursue more challenging work or who plan an additional degree.

Group Requirements

To meet the requirements for the major program, students must include at least one of the following, with a grade of C- or higher.
- ECON 102-3 The World Economy
- ECON 104-3 Economics and Government
- ECON 110-3 Foundations of Economic Ideas
- ECON 208-3 History of Economic Thought
- ECON 250-3 Economic Development in the Pre-industrial Period
- ECON 309-5 Introduction to Marxian Economics
- ECON 353-4 Economic History of Canada

Honors Program

In addition to the lower division courses for the economics major, students must receive credit for at least 50 upper division credit hours in economics including the following.
- BUEC 333-4 Statistical Analysis of Economic Data
- ECON 301-4 Microeconomic Theory I: Competitive Behavior
- ECON 302-4 Microeconomic Theory II: Strategic Behavior
- ECON 305-5 Intermediate Macroeconomic Theory
- ECON 331-5 Introduction to Mathematical Economics
- ECON 435-5 Econometric Methods
- ECON 499-6 Honors Seminar in Economics

and at least two of the following options
- ECON 402-3 Advanced Microeconomic Theory
- ECON 403-3 Advanced Macroeconomic Theory

Two 400 division ECON courses (excluding ECON 402, 403, 431, 435, BUEC 433 and 445)

[joint honors students who have successfully completed both MATH 222 and 251 need not take ECON 331. However, at least 32 upper division credit hours in economics must still be taken.

Group Requirements

Students must also include at least one course from the economics group requirement (see Group Requirements) and are responsible for ensuring they have also fulfilled all requirements for an honors degree set up by the Faculty of Arts and Social Sciences.

Minor Program

Lower Division Requirements

A minimum C- grade in all of the required courses listed below is required.

- ECON 103-3 Principles of Microeconomics
- ECON 105-3 Principles of Macroeconomics

and at least two 200 division ECON or BUEC courses (excluding BUEC 232)

Upper Division Requirements

At least 15 upper division credit hours in economics or BUEC courses, taken following the completion of 60 credit hours are required. A maximum of eight ECON upper division credit hours from another institution can be applied to the minor in economics.

Joint Major Program

Lower Division Requirements

Requirements are the same as for the economics major and business administration major.

Upper Division Requirements

Students must complete at least 29 credit hours of upper division credit in business administration or BUEC including the core courses with the following exception: BUS 207 and 303 are waived.

BUEC 333, which must be taken, will count as upper division economics hours rather than upper division business administration hours.

- three courses beyond the core must be completed
- at least two 400 division BUS or BUEC courses excluding practicum courses and BUS 478. These courses may be within the area of concentration.
- plus at least 25 credit hours of upper division credit in BUEC*** or economics including

BUEC 333-4 Statistical Analysis of Economic Data
- ECON 301-4 Microeconomic Theory I: Competitive Behavior
- ECON 305-5 Intermediate Macroeconomic Theory

and at least one 400 division ECON or BUEC course (excluding ECON 431, 435, BUEC 433 and 485)

**BUEC courses may count only once as business administration or economics credit.

Group Requirements

Students must include at least one course from the economics groups requirements. For information, see “Group Requirements” on page 152.

Joint Major in Economics and Political Science

For requirements, see “Joint Major in Political Science and Economics” on page 178.

Joint Major in Geography and Economics – Environmental Specialty

For requirements, see “Joint Major in Geography and Economics – Environmental Specialty” on page 162.

Joint Major in Latin American Development Studies and Economics

See “Joint Major Programs” on page 170.

Joint Honors in Business Administration and Economics

Lower Division Requirements

Students must satisfy the lower division requirements for a joint major in business administration and economics.

Upper Division Requirements

Students complete at least 35 upper division business administration credit hours including the core courses with the exception of BUEC 333, which is counted as economics upper division hours rather than business administration upper division hours. See "Core Courses" on page 194.

As well, students complete an area of concentration and at least three 400 division business administration courses (excluding practicum courses and BUS 478) plus at least 32 credit hours of upper division credit in economics or BUEC including all of

- BUEC 333-4 Statistical Analysis of Economic Data
- ECON 301-4 Microeconomic Theory I: Competitive Behavior
- ECON 305-5 Intermediate Macroeconomic Theory

ECON 331-5 Introduction to Mathematical Economics**
ECON 435-5 Quantitative Methods in Economics
ECON 499-6 Honors Seminar in Economics
and one of
ECON 402-3 Advanced Topics in Microeconomics
ECON 403-3 Advanced Topics in Macroeconomics
*these courses may be within the areas of concentration
**honors students who have successfully completed both MATH 323 and 251 need not take ECON 331.
However, at least 50 upper division credit hours in economics must still be taken.

Group Requirements
Students must include at least one course from the economics group requirements. For details, see Group Requirements.

Grade Point Averages
For information about required grade point averages for the BA credential, See "Graduation GPA Requirements" on page 131.

Co-operative Education
This program, for qualified students who wish to acquire practical experience in economics, entails planned terms of study and employment in the student's choice of area.
To be eligible for admission, students must have completed 30 credit hours including ECON 103 (or 200) and ECON 105 (or 205). At least 12 of these must be completed at Simon Fraser University with a minimum CGPA of 2.75.
Arrangements for work terms are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one term in advance. See “Co-operative Education” on page 237 for details.

Department of English
6129 Academic Quadrangle, 778.782.3136 Tel, 778.782.5737 Fax, www.sfu.ca/english

Chair
T. Grieve BA, MA (S Fraser), PhD (Johns H)

Professors Emeriti
T. Alkan BA (Port), MA, PhD (Col)
R. Arab BA, MA (Dal), PhD (Col)
S. Brook BA (Otago), PhD (Duke)
D. Chariandy BA, MA (Car), PhD (York, Can)
C. Colligan BA (Vic, BC), MA, PhD (Ott)
S. Collis BA (Vic, BC), PhD (S Fraser)
P. Cramer MPhil (Maio), MA, PhD (Carnegie-Mellon)
J. Derksen BA (Vic, BC), MA, PhD (Calga)
P. Dickinson BA (Tor), MA, PhD (Br Col)
M. Evertson BA (Madison), MA (Tenn), PhD (N Carolina)
J. Fleming BA (Br Col), MA, PhD, PhD (Col)
M. Hussey BA (Calif, MA), PhD (Wis)
C. Kim BA, MA, PhD (York)
M. Levy BA, MA (Tor), PhD (Calga)
M. Linley BA (W Laur), MA, PhD (Ott)
S. McCal BA (Ou), MA (Br Col), PhD (York)
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D. Symons BA (Colorado), MA, PhD (Roch)
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Senior Lecturers
N. Didicher BA (Guelph), MA, PhD (Ott)
R. Ramsey BA, MA (Br Col), PhD (Tor)
M. Valiquette BA, MA (S Fraser)
M. Sawatsky BA, MA (S Fraser)

Lecturer
A. Hungerford BA, MA (S Fraser)

Advisors
Ms. K. Ward, 6133 Academic Quadrangle, 778.782.4835
Ms. M. Curtian, 6137 Academic Quadrangle, 778.782.3371

The associate chair and other faculty are available to give advice about the Department of English. Enquire at the departmental office. Students planning to enter the honors program are particularly encouraged to consult with departmental advisors.
Course outlines for all courses vary each term. Check at the Department of English general office.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program
Lower Division Requirements
Students complete two of
ENGL 101-3 Introduction to Fiction
ENGL 102-3 Introduction to Poetry
ENGL 103-3 Introduction to Drama
ENGL 104-3 Introduction to Prose Genres
ENGL 105-3 Introduction to Issues in Literature and Culture
ENGL 199-3 Introduction to University Writing
and four of the following courses, one of which must be ENGL 201 or 203, and one of which must be ENGL 205 or 206
ENGL 201-3 Medieval Literature
ENGL 202-3 Early Modern Literature
ENGL 205-3 Restoration and 18th Century Literature
ENGL 206-3 19th Century Literatures in English

ENGL 207-3 20th Century Literatures in English
ENGL 210-3 Writing and Critical Thinking
ENGL 214-3 History and Principles of Rhetoric
ENGL 216-3 History and Principles of Literary Criticism

Any one, but not more than one, of ENGL 101, 102, 103, 104, 105, and 199 may be replaced by any three unspecified 200 division transfer credits in English or in ENGL-Writing. Any one, but not more than one of ENGL 207, 210, 214 and 216 may be replaced by any three unspecified 200 division transfer credits in English.

A student who enters the University with 18 lower division transfer credits in English will have met the department’s lower division requirements for a major in English provided those credit hours include any one of ENGL 101, 102, 104, 105, 109, or 199; one of ENGL 201 or 203; and one of ENGL 205 or 206.

Upper Division Requirements
An English major must obtain 32 credit hours in upper division English courses, of which must come from

Group 1
ENGL 300-4 Old English
ENGL 304-4 Studies in Medieval Literature
ENGL 306-4 Chaucer
ENGL 310-4 Studies in Early Modern Literature
Excluding Shakespeare
ENGL 311-4 Early Shakespeare
ENGL 313-4 Late Shakespeare
ENGL 320-4 Studies in 18th Century Literature

ENGL 322-4 Studies in the Eighteenth Century British Novel
ENGL 400-4 Advanced Old English
ENGL 404-4 Topics in Medieval Literature
ENGL 407-4 Topics in Early English Drama
ENGL 410-4 Topics in Early Modern English

Non-Dramatic Literature
ENGL 416-4 Milton
ENGL 420-4 Topics in 18th Century Literature and one from

Group 2
ENGL 354-4 Studies in Canadian Literature before 1920
ENGL 357-4 Studies in Canadian Literature since 1920
ENGL 359-4 Studies in the Literature of British Columbia

Eight English credit hours must be at the 400 division, excluding Directed Studies courses (ENGL 441, 442, 443, and 444).

With permission of the department, other English courses of equivalent content may be substituted for those required in Group 1 and 2. The department may designate up to eight credit hours of program related upper division courses that are offered by other departments as being acceptable in fulfilling part of the required credit hours in the major program.

Students must maintain at least a 2.00 grade point average in English courses.

Honors Program
This program is intended for those with a special interest in English literature and who wish to pursue studies beyond the course work required for the major.

The program requires the study of theory, criticism and research methods in ENGL 364, 465 and 494. The honors essay (ENGL 496) allows for independent research and writing on a topic of the student's choice.
Lower Division Requirements

Students proposing to enter honors English take the same lower division English courses as English majors. ENGL 216 is recommended. Normally a 3.5 GPA in all English courses taken at Simon Fraser University is required for acceptance and continuance in the program but does not in itself guarantee either.

Upper Division Requirements

A student in honors English must obtain 52 credit hours in upper division English courses, one of which must come from within the grouping ENGL 300, 304, and 306; one from within the grouping ENGL 310, 311 and 313; one from within the grouping ENGL 320, 322, 327, and 330; and one from within the grouping ENGL 354, 357 and 359. ENGL 364, 465, 494 and 496 are required and 20 credit hours must be at the 400 division, excluding Directed Studies courses (ENGL 441, 442, 443 and 444). On completion, students may apply for honors program admission.

Minor Program

Lower Division Requirements

An English minor must obtain 12 credit hours of lower division English courses including two of ENGL 101-3 Introduction to Fiction, ENGL 102-3 Introduction to Poetry, ENGL 103-3 Introduction to Drama, ENGL 104-3 Introduction to Prose Genres, ENGL 105-3 Introduction to Issues in Literature and Culture, ENGL 199-3 Introduction to University Writing and two of the following courses, one of which must be ENGL 201, 203, 205 or 206.

ENGL 201-3 Medieval Literature
ENGL 203-3 Early Modern Literature
ENGL 205-3 Restoration and 18th Century Literature
ENGL 206-3 Nineteenth Century Literatures in English
ENGL 207-3 Twentieth Century Literatures in English
ENGL 210-3 Writing and Critical Thinking
ENGL 214-3 History and Principles of Rhetoric
ENGL 216-3 History and Principles of Critical

Any one but not more than one of ENGL 101, 102, 103, 104, 105 and 199 may be replaced by any three unspecifed transfer credit hours in English or in ENGL – Writing. Any one, but not more than one, of ENGL 201, 207, 210, 214 and 216 may be replaced by any three unspecifed 200 division transfer credit hours in English.

Upper Division Requirements

An English minor must obtain 16 credit hours in upper division English courses, one of which must come from within the grouping ENGL 300, 304, 306, 310, 311, 313, 320, and 322; and one from within the grouping ENGL 354, 357, 359.

Four credit hours must be at the 400 division, excluding Directed Studies courses (ENGL 441, 442, 443 and 444). No courses from other departments may be substituted for the English courses which make up the minor.

Students must maintain at least a 2.00 grade point average in English courses.

Extended Minor Program

An extended general minor consists of the lower division requirements for a major and the upper division requirements for a minor. Approval by the Department of English advisor is required.

Languages Other Than English

Most graduate schools require some proficiency in one or two languages other than English. Those who contemplate graduate studies in this field are advised to include language courses other than English in their programs.

Joint Major in English and Canadian Studies

See “Joint Major Programs” on page 136 for program information.

Joint Major in English and French Literatures

See “Joint Major in English and French Literatures” on page 159 for program information.

Joint Major in English and Humanities

See “Joint Major in English and Humanities” on page 167 for program information.

Joint Major in English and Women’s Studies

See “Joint Major in English and Women’s Studies” on page 188 for program information.

Co-operative Education Program

This program, for students who wish to acquire work experience in areas related to English studies, entails planned terms of study and employment in an area of the student’s choice.

To be admitted, students must have completed 30 credit hours with a minimum CGPA of 3.0. Prior to admission, students must have completed five English courses (15 credit hours) including the lower division requirements for a minor in English.

College transfer students must complete at least 15 credit hours at Simon Fraser University before becoming eligible for admission to the co-operative education program. They also must satisfy the requirements shown above, or the equivalent.

Co-operative education programs elsewhere may be credited with the term(s) already taken. The applicability of such terms depends on the evaluation.

Arrangements for the work terms are made through the Faculty of Arts and Social Sciences co-operative education co-ordinators.

To continue in the program, students must maintain a minimum CGPA of 3.0 in their academic course work.

Interested students should contact the Department of English for further information. Also, see “Co-operative Education” on page 237.

First Nations Studies Program

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Associate Professor
M. Boelscher Ignace MA (Georg August Univesitat), PhD (S Fraser), co-ordinator, SFU Kamloops

Assistant Professors
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A.G. Ross BA, MA (Wash), PhD (Calif)*

Advisory Committee
M. Boelscher Ignace, Sociology and Anthropology
D. Burley, Archaeology
D. Culhane, Sociology and Anthropology
M.E. Keim, History
D. Mellow, Linguistics
A. Ross, Archaeology, First Nations Studies
R. Russell, Mathematics
J.R. Welch, Archaeology, Resource and Environmental Management
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L. Yam, 9091 Arts and Social Sciences Building, 778.782.5595

*joint appointment with archaeology
**joint appointment with sociology and anthropology

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Minor Program

The minor program offers courses in the study of traditional and contemporary issues involving the aboriginal peoples of North America and Canada in particular. Designed for both First Nations students and non-First Nations students, its focus is on traditional cultures, languages, indigenous knowledge and histories of First Nations, as well as such issues as Indian-White relations, the development of federal and provincial policy towards aboriginal peoples, aboriginal rights and title questions, issues of economic development and self-government and gender and intergenerational issues. The objective of the minor is to present and examine critically the above issues, taking into account the perspectives of aboriginal peoples. It will expose students to research methods pertinent to past, present and future issues affecting aboriginal peoples. In this respect, it is especially relevant for First Nations students who wish to put knowledge of First Nations/aboriginal issues and research skills to practice in serving their communities and nations.

This program may be taken in conjunction with any major or honors bachelor’s degree, or with a bachelor of general studies degree. It is expected that First Nations studies courses will be taught by faculty with appointments in First Nations or joint appointments in First Nations and other disciplines.

Lower Division Requirements

Students complete at least nine credit hours including FNST 101-3 The Cultures, Languages and Origins of Canada’s First Peoples.

FNST 201-3 Canadian Aboriginal Peoples’ Perspectives on History

and at least one course from the following list

ARCH 200-3 Special Topics in World Prehistory (when topic is Ancient Peoples of British Columbia)
ARCH 223-3 The Prehistory of Canada
BISC 272-3 Special Topics in Biology (when topic is Native Ethnobotany)

HIST 201-3 The History of Western Canada
LING 231-1 Introduction to a First Nations Language I

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LING 232-3 Introduction to a First Nations Language II
LING 260-3 Language, Culture, and Society (when topic appropriate)
SA 298-4 Aboriginal Peoples and British Columbia: Introduction
STAT 203 (or equivalent) and SA 255 (or equivalent course in research methods) are strongly recommended.

Other courses which have First Nations content may be applied toward the minor as an elective, subject to approval by the program director.

**Upper Division Requirements**

At least 15 upper division credit hours are required, including at least six credit hours from:
- FNST 301-3 Issues in Applied First Nations Studies Research
- FNST 401-3 Aboriginal Rights and Government Relations
- FNST 402-3 The Discourse of Native Peoples
- FNST 403-3 Indigenous Knowledge in the Modern World

Students must also complete at least nine credit hours from:
- ARCH 332-3 Special Topics in Archaeology I*
- ARCH 333-3 Special Topics in Archaeology II*
- ARCH 360-5 Native Cultures of North America
- ARCH 378-3 Pacific Northwest North America
- ARCH 386-3 Archaeological Resource Management
- ARCH 479-3 Directed Readings*
- CRIM 419-3 Indigenous Peoples, Crime, and Criminal Justice
- FNST 301-3 Issues in Applied First Nations Studies Research**
- FNST 322-3 Special Topics in First Nations Studies
- FNST 332-3 Ethnobotany of British Columbia First Nations
- FNST 401-3 Aboriginal Rights and Government Relations**
- FNST 402-3 The Discourse of Native Peoples**
- FNST 403-3 Indigenous Knowledge in the Modern World**
- FNST 442-3 Directed Readings
- HIST 326-4 History of Aboriginal Peoples of North America Since 1850
- LING 331-3 Description and Analysis of a First Nations Language I
- LING 332-3 Description and Analysis of a First Nations Language II
- LING 430-3 Native American Languages
- LING 431-3 Language Structures I***
- LING 432-3 Language Structures II***
- SA 386-4 The Ethnography of Politics
- SA 388-4 Comparative Studies of Minority Indigenous Peoples

*when offered as archaeological field school. This combination counts as only one course for satisfying requirements for the minor.
**when not used toward requirement of six credit hours
***only when the topic is an aboriginal language

Other courses which have First Nations content may be applied toward the minor as electives, subject to approval by the program director.

Credit accumulated in the certificate in First Nations Studies research may be applied toward the minor in First Nations studies.

**Joint Major in Archaeology and First Nations Studies**

This program is designed for students who are interested in focusing and expanding their expertise in areas where these two disciplines intersect. The program will be offered predominantly at the Simon Fraser University Burnaby campus although students in the Simon Fraser University Kamloops program who are able to enroll in required course work may also complete this program.

Students who complete the joint major gain detailed insight into ancient and contemporary First Nations cultures and historic past, ancient and modern artistic traditions, and historic and contemporary perspectives on the contemporary world, including First Nations issues in archaeology, cultural heritage, resource management, government relations and lands claims. Students will be trained in material culture studies, techniques and technologies for analyzing the ancient and historic past, ancient and modern artistic traditions, conservation and management of archaeological and museum collections, and planning and implementation of museum, gallery and other public exhibits related to First Nations heritage.

Students should plan their program in consultation with both the First Nations Studies and Archaeology advisors.

**Lower Division First Nations Studies Requirements**

FNST 101-3 The Cultures, Languages and Origins of Canada’s First Peoples
FNST 201-3 Canadian Aboriginal Peoples’ Perspectives on History
SA101-4 Introduction to Anthropology and one of:
- LING 100-3 Communication and Language
- LING 260-3 Language, Culture, and Society
- SA 286-4 Aboriginal Peoples and British Columbia: Introduction

**Lower Division Archaeology Requirements**

ARCH 131-3 Human Origins
ARCH 201-3 Introduction to Archaeology
ARCH 272-3 Archaeology of the Old World
ARCH 273-3 Archaeology of the New World

**Upper Division First Nations Studies Requirements**

Students must complete at least 22 credit hours of upper division First Nations studies, including:
- FNST 301-3 Issues in Applied First Nations Studies Research
- FNST 401-3 Aboriginal Rights and Government Relations
- FNST 402-3 The Discourse of Native Peoples
- FNST 403-3 Indigenous Knowledge in the Modern World
- the remaining 10 credit hours from the following:
- CRIM 311-3 Minorities and the Criminal Justice System
- CRIM 419-3 Indigenous Peoples, Crime and Criminal Justice
- FNST 322-3 Special Topics in First Nations Studies
- FNST 332-3 Ethnobotany of British Columbia First Nations
- FNST 442-3 Directed Readings in First Nations Studies
- HIST 325-4 History of Aboriginal Peoples of North America
- HIST 326-4 History of Aboriginal Peoples of North America Since 1850
- HIST 427-4 Problems in the History of Aboriginal Peoples
- LING 430-3 Native American Languages
- SA 388-4 Comparative Studies of Minority Indigenous Peoples
- SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

Other courses that have First Nations content may be applied toward the program, subject to approval by the program director.

**Upper Division Archaeology Requirements**

Students are required to complete at least 24 credit hours of upper division archaeology including:
- ARCH 372-5 Material Culture Analysis
- ARCH 471-5 Archaeological Theory
- and at least 14 credit hours from the list below.
- ARCH 386-3 Archaeological Resource Management
- ARCH 388-4 Biological Archaeology
- ARCH 399-5 Management of Archaeological Collections
- ARCH 489-5 Archaeological Conservation
- ARCH 499-5 Management of Archaeological Collections
- ARCH 380-5 Native Cultures of North America
- ARCH 378-3 Pacific Northwest North America
- special topics and/or directed readings courses may be applied toward the program, subject to approval by the program director.

**Post Baccalaureate Diploma in First Nations Studies**

Through First Nations Studies courses as well as courses from other disciplines that involve the study of Aboriginal issues, this program provides in-depth knowledge of Aboriginal and indigenous issues, including First Nations cultures, and indigenous knowledge, historical contexts, natural and cultural resource management, and legal and public policy issues. In addition, it will provide learners with opportunities to engage in dialogue and discussion around these issues and to evaluate them, taking into account Aboriginal perspectives.

This program is comprised of at least 30 credit hours of upper division or graduate level courses.

Courses are offered on an ongoing basis at both the Burnaby and Kamloops campuses.

**Admission Requirements**

Applicants must have a bachelor's degree with a minimum 2.00 GPA from a BC university, or a 2.4 GPA from a university outside of BC, or equivalent.

Students can apply for entry in the fall, spring or summer terms. Consult with the Burnaby or Kamloops program offices for admission deadlines.

**Program Requirements**

The post baccalaureate diploma (PBD) program can be completed through full-time or part-time study, or a combination of both, and by attending Simon Fraser University’s Burnaby and/or Kamloops locations.

Upon University admission, students must be approved for entry into the post baccalaureate diploma (PBD) program and must complete a course plan that will comprise their PBD program.

Students are expected to finish the program within two or three years, to a maximum of five years, and must obtain a 2.5 GPA in all courses that are applied towards this diploma.

Transfer credit may be approved provided it meets the program requirements, and that at least 16 of the 30 required credit hours are taken at Simon Fraser University. Applications for transfer credit must be initiated at the time of application for admission to Simon Fraser University.
Credit applied to this program may not be applied to another Simon Fraser University certificate, diploma or degree, or vice-versa.

**Prerequisite Courses**
Students must complete all of:
- FNST 101-3 The Cultures, Languages and Origins of Canada’s First Peoples
- FNST 201-3 Canadian Aboriginal Perspectives on History

**Core Courses**
Students must complete all of:
- FNST 301-3 Issues in Applied First Nations Studies
- RNTR 423-1 Aboriginal Rights and Government Relations
- RNTR 402-3 The Discourse of Native Peoples
- RNTR 403-3 Indigenous Knowledge in the Modern World

**FNST Elective Courses**
Students must complete at least six credit hours chosen from the following:
- FNST 322-3 Special Topics: First Nations Studies
- FNST 332-3 Ethnobotany of British Columbia First Nations
- FNST 442-3 Directed Readings in First Nations Studies

**Additional Electives**
The remaining 12 elective credit hours will be taken by completing additional credit hours from the list above (FNST 322, 332, 442) and/or from the following Simon Fraser University courses.

- ARCH 360-5 Native Cultures of North America
- ARCH 386-3 Archaeological Resource Management†
- CRIM 311-3 Minorities and the Criminal Justice System
- CRIM 419-3 Indigenous Peoples, Crime and Criminal Justice
- HIST 325-4 History of Aboriginal Peoples of North America to 1850
- HIST 326-4 History of Aboriginal Peoples of North America since 1850
- LING 331-3 Description and Analysis of a First Nations Language I
- LING 332-3 Description and Analysis of a First Nations Language II
- LING 430-3 Native American Languages
- LING 431-3 Language Structures I
- LING 432-3 Language Structures II
- LING 433-3 First Nations Language Mentoring I
- LING 434-3 First Nations Language Mentoring II
- SA 286-4 Native Peoples and Public Policy
- SA 388-4 Comparative Studies of Minority Indigenous Peoples
- SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

*If topic is appropriate Additional upper division courses with First Nations content, as well as graduate courses, may be approved by the Faculty of Arts and Social Sciences to be used to satisfy program requirements.

**SFU Kamloops Program**
365 Yellowhead Highway, Kamloops, BC V2H 1H1, 250.828.9799 Tel, or 1.800.399.5565 toll free Tel, 250. 828.9864 Fax, sfu_kamloops@sfu.ca

**Collaborative Major Program with Thompson Rivers University**
This collaborative major is a joint initiative between Thompson Rivers University (TRU) and Simon Fraser University, the latter facilitated through Simon Fraser University’s Aboriginal partnership program on the Kamloops Indian Reserve in the Interior of British Columbia. The program is available to Simon Fraser University students and to Thompson Rivers University students who wish to complete this major as part of their degree requirements for either a TRU or Simon Fraser University Bachelor of Arts degree. Courses marked with † are offered at Thompson Rivers University.

**Lower Division Requirements**
(24-25 credit hours)

**Required Courses**
Students must complete:
- FNST 201-3 Canadian Aboriginal Peoples’ Perspectives on History
- and one of:
  - LING 231-3 Introduction to First Nations Language I
  - LING 232-3 Introduction to First Nations Language II
  - or, for those with an introductory or intermediate level background in an Aboriginal language, both of:
    - LING 433-3 First Nations Language Mentoring I
    - LING 434-3 First Nations Language Mentoring II
  - and one of:
    - ANTH 214-3 Canadian Native Peoples†
    - FNST 101-3 The Cultures, Languages and Origins of Canada’s First Peoples
  - and one of:
    - ANTH 121-3 Introduction to Cultural Anthropology†
    - SA 101-4 Introduction to Anthropology
    - and one of:
    - ANTH 119-3 Introduction to Archaeology†
    - ARCH 100-3 Native Peoples and Places
    - ARCH 201-3 Introduction to Archaeology
  - FNST 101 and 201 are also available as distance education courses.

**Elective Courses**
Students must also complete at least six credit hours of elective courses, with First Nations/Aboriginal studies content, selected from the following:
- ANTH 223-3 Indians of British Columbia†
- ANTH 219-3 Ancient North Americans†
- ANTH 260-3 Minorities in the Modern World†
- ARCH 200-3 Special Topics in World Prehistory
- ARCH 223-3 The Prehistory of Canada
- ARCH 273-3 Archaeology of the New World
- CNST 200-3 Introduction to Canadian Studies†
- ENG 241-3 Canadian Native Literature†
- GEOG 223-3 The Regional Geography of BC and the Yukon
- HIST 201-3 The History of Western Canada
- HIST 202-3 Native History of Canada†
- SA 286-4 Aboriginal Peoples and British Columbia: Introduction
- SOCI 201-3 Race and Ethnic Relations†
- TMGT 102-3 Cultural, Heritage and Nature Interpretation†

With the approval of the First Nations Studies Program advisor, students may use other Simon Fraser University or TRU courses that contain significant First Nations/Aboriginal studies content to meet this group requirement.

**Upper Division Requirements**
Students must complete at least 30 upper division credit hours from Simon Fraser University or from Thompson Rivers University. It is the student’s responsibility to ensure that they have met the prerequisites for the upper division courses in which they wish to enroll.

**Required Courses**
Students must complete 12 credit hours including both of:
- FNST 322-3 Special Topics in Applied First Nations Studies
- FNST 403-3 Indigenous Knowledge in the Modern World

and one of:
- ANTH 327-3 First Nations Natural Resource Management†
- FNST 401-3 Aboriginal Rights and Government Relations
- and one of:
  - ENG 447-3 Studies in Aboriginal Literature†
  - FNST 402-3 The Discourse of Native Peoples

**Group Requirements**
In addition to the above requirements, students must complete at least one course from each of the following groups:

**Group I Aboriginal Language and/or Linguistics of Aboriginal Languages, Indigenous Philosophy, Literature, Fine and Performing Arts**
- ENG 447-3 Studies in Aboriginal Literature†
- FNST 222-3 Special Topics First Nations Studies
- FNST 402-3 The Discourse of Native Peoples
- FNST 442-3 Directed Readings in First Nations Studies
- LING 332-3 Morphology†
- LING 331-3 Description and Analysis of a First Nations Language I
- LING 332-3 Description and Analysis of a First Nations Language II
- LING 433-3 First Nations Language Mentoring I
- LING 434-3 First Nations Language Mentoring II
- LING 433-3 First Nations Language Mentoring II
- LING 435-3 Ecological Archaeology* (or ANTH 325-3)
- LING 434-3 First Nations Language Mentoring I
- LING 433-3 First Nations Language Mentoring II
- LING 432-3 Language Structures II
- LING 332-3 Description and Analysis of a First Nations Language I
- LING 331-3 Description and Analysis of a First Nations Language I
- LING 323-3 Introduction to First Nations Language I
- LING 322-3 Special Topics First Nations Studies
- LING 434-3 First Nations Language Mentoring II
- LING 435-3 Ecological Archaeology* (or ANTH 325-3)
- LING 433-3 First Nations Language Mentoring II
- LING 432-3 Language Structures II
- LING 331-3 Description and Analysis of a First Nations Language I
- LING 332-3 Description and Analysis of a First Nations Language II

**Group II Aboriginal History and Public Policy**
- ANTH 405-3 Canadian Status Treaty Indian Reserve Communities†
- CRIM 419-3 Indigenous Peoples, Crime and Criminal Justice
- FNST 322-3 Special Topics in First Nations Studies
- FNST 401-3 Aboriginal Rights and Government Relations
- FNST 442-3 Directed Readings in First Nations Studies
- HIST 325-4 History of Aboriginal Peoples of North America to 1850
- HIST 326-4 History of Aboriginal Peoples of North America since 1850
- SA 386-4 Native Peoples and Public Policy
- SA 388-4 Comparative Studies of Minority Indigenous Peoples
- SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar
- "If topic is appropriate Additional upper division courses with First Nations content, as well as graduate courses, may be approved by the Faculty of Arts and Social Sciences to be used to satisfy program requirements."

Simon Fraser University 2007 • 2008 Calendar
Program Requirements
• successful completion of 30 credit hours, of which 21 are earned by completing six required courses. The remaining nine credit hours are selected from the specified list of optional courses.
• completion of a practicum, where the student can apply research skills in a supervised setting.
• minimum grade point average of 2.0 calculated on all courses applied to the certificate. Duplicate courses are counted only once.
• completion of the certificate normally within five years of program admission.

Core Courses
ARCH 273-3 Archaeology of the New World
HIST 201-3 The History of Western Canada
LING 130-3 Practical Phonetics
SA 295-4 Introduction to Social Research
SA 286-4 Aboriginal Peoples and British Columbia: Introduction and one of SA 101-4 Introduction to Anthropology SA 150-4 Introduction to Sociology

Optional Courses
ARCH 200-3 Special Topics in World Prehistory
ARCH 333-3 Special Topics in Archaeology I
ARCH 336-3 Special Topics in Prehistoric and Indigenous Art
ARCH 360-5 Native Cultures of North America
BISC 272-3 Special Topics in Biology
BISC 372-3 Special Topics in Biology
CRIM 419-3 Indigenous Peoples, Crime, and Criminal Justice
FNST 101-3 The Cultures, Languages and Origins of Canada's First Peoples
FNST 201-3 Canadian Aboriginal Peoples' Perspectives on History
FNST 301-3 Issues in Applied First Nations Studies Research
FNST 401-3 Aboriginal Rights and Government Relations
FNST 402-3 The Discourse of Native Peoples
HIST 326-4 History of Aboriginal Peoples of North America since 1850
LING 100-3 Communication and Language
LING 231-3 Introduction to a First Nations Language I
LING 232-3 Introduction to a First Nations Language II
LING 260-3 Native Cultures and Society
SA 100-4 Perspectives on Canadian Society
SA 201-4 Anthropology of Contemporary Life
SA 292-4 Special Topics in Sociology
SA 293-4 Special Topics in Anthropology
SA 386-4 Native Peoples and Public Policy
Overall Course Selection
The program's practicum component can be fulfilled by selecting one of three options. Some courses within each option have prerequisites; accordingly, students should plan their programs in advance.

Option 1
SA 141 is required. This is the first term of the co-operative education program in sociology and anthropology. The employment situation must be acceptable to the Native Studies research program.

Option 2
At least five credit hours of a field school in archaeology, involving survey and excavation of a native heritage site are required.

Option 3
SA 360 is required, which permits a faculty member to supervise an independent field research project acceptable to the Native Studies research certificate.

Certificate in Native Studies Research
This program provides a unique opportunity to explore the history and prehistory, culture, language and contemporary situation of Canadian aboriginal peoples, and to acquire basic research skills in aboriginal issues. Particular emphasis is on the study of First Nations/aboriginal people in the interior of British Columbia.

Offered through Simon Fraser University in Kamloops, all program components can be taken at the University Centre in Kamloops or at Simon Fraser University at Burnaby, and normal certificate completion requirements comprise five full study terms. The certificate can be completed as a two year program, or be part of a BA degree program. The certificate is especially suitable for aboriginal individuals who wish to gain proficiency in studying First Nations/aboriginal issues and to acquire social research skills to use in their communities and nations. It is also open to non-aboriginal students. The certificate is subject to continued funding from external sources.

Admission Requirements
Normally, Simon Fraser University admission requirements apply. Students may be admitted under regular or special entry categories. Application assistance and advice is available at the offices in Kamloops or Simon Fraser University's First Nations Studies program.

Note: Some courses taken at the Burnaby or Vancouver campuses may count toward the certificate, subject to certificate steering committee approval. A three course maximum (totaling not more than 10 credit hours) of comparative content from an approved college or university may be transferred toward program requirements, subject to University transfer credit regulations, and subject to certificate steering committee approval. Credit hours applied to this certificate may also be applied to major or minor programs or to a bachelor's degree under normal regulations governing those programs, but may not be applied to another Simon Fraser University certificate or diploma.

Co-operative Education
In conjunction with other Faculty of Arts and Social Sciences departments and other faculties offering co-operative education, eligible students wishing to undertake a First Nations studies minor may apply to co-op for work placements in native organizations or with employers in the private, public and non-profit sectors.

Department of French
2630 Diamond Building, 778.782.4740 Tel, 778.782.5932 Fax, www.sfu.ca/french
Chair (to be announced)
Professors Emeriti
M.C. Fauquenoy LÈsL,_dr èsCycle (Paris), Chev Pames Acad France, FRScAn G. Merler BA (Br Col), MA, PhD (Laval) J. Viswanathan LÈsL (LÌege, MA (III), DèsL (LÌege)
Professor R. Davison BA, MA, PhD (McG)
Associate Professors R. Canac-Marquis BA, MA (UQAM), PhD (Mass) Steele, BA, MA (Br Col), PhD (Tower) PM. Wrenn BA, MA, PhD (Tower)
Assistant Professors J. Calderon BA, MA (Queens), PhD (McG) L. Frappier BA, MA, PhD (Montr) G. Grisè BA, BE, Montr, Licence (Laval), Maîtrise, Dr èsCycle (Paris), Chev Ord PÈleade, FRScAn C. Guibault BA, MA (Laval), PhD (Alta) M. F. Lapointe BA, MA, PhD (Montr) G. Planchenault MA (Paris), MA (Jussieu), PhD (Lond) C. V. Gourououx MA, DEA, PhD (Paris)
Senior Lecturers C. Trepàner BA, MA (Laval)
Lecturers L. Bruneau BA (Qu), Med (S Fraser) P. De Rycke BA, DEA, Dr èsCycle (Paris) C. Rasskhe BA, MA (Br Col)
Advisor Ms. B. Harrison, 2630 Diamond Building, 778.782.4505, pharriso@sfu.ca
The Department of French offers honors, major and extended minor programs encompassing French language, literature and linguistics. In addition, joint major programs are available in English and French literatures, in French, history and political science, and in French and humanities. A certificate program in French language proficiency is also offered for those who wish to enhance their knowledge of French for cultural, professional or employment purposes.

The department also offers a Certificate in Italian Studies (see "Certificate in Italian Studies" on page 160).
Initial Course Selection (French)
Native French speakers, or those who received secondary education entirely within a French-speaking community will not normally be admitted to a French language course numbered 100 to 300 inclusive.

French Language Placement Test
Students fitting into the following categories need not take the placement test but should enroll in the course indicated below.
- BC grade 12 French completed within the last three years who have received a final grade of A: enroll in FREN 211
- BC grade 12 French completed (irrespective of grade) within the last three years and who have subsequently spent at least five weeks in a francophone environment: enroll in FREN 211
- BC grade 12 French completed within the last three years who do not meet either of the above two conditions: enroll in FREN 210
- Students who have completed grade 11 French within the last three years and have taken no more French since: enroll in FREN 122
- Fewer than three years of French taken in high school and no other French: enroll in FREN 121
- No French at all: enroll in FREN 120
- High school taken in a francophone educational system: enroll in a francophone country or province: enroll in FREN 230/240, 270, or 301
All others are required to take the placement test including the following.
- French immersion, programme francophone, IB and AP students
- college/university transfer students with transfer credit hours in French
- students from other provinces or countries
- students who have taken any credit/non-credit French course of six or more weeks duration since high school
- students who have lived (minimum 30 months) in a francophone environment
- special cases and any students seeking advice on eligibility to earn challenge credit for 210, and/or 211, and/or 221, and/or 222
Those required to take the placement test are urged to consult the department's website at www.sfu.ca/french for dates and times of the tests.

Course Challenge
Up to 12 credit hours of lower division French courses may be challenged by students who place in more advanced language courses. Courses open to challenge are: FREN 210, 211 or 212, 221, 222, or 223. Students may challenge lower level language courses only when enrolled in one of FREN 211 (or 212), 221, 222, and 301. Challenge of language courses lower than the one actually enrolled in may be initiated by filling out the above course challenge form, obtainable from the French general office. The challenge must be approved by the department and submitted to Student Services prior to the tenth day of classes. Successful completion (with a grade of at least C) of the language course actually taken automatically adds the challenge credit to the student's transcript. Please see “Course Challenge” on page 32.

Many FREN courses were renumbered effective fall 2003. Students with credit for French courses prior to this time should consult the department advisor.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see "Writing, Quantitative, and Breadth Requirements" on page 130.

Honors, Major, Extended Minor Programs
To be approved in a program, a student must have successfully completed (i.e. obtained a minimum grade of 2.0 or better in each of) the following courses or equivalents: FREN 210, 211 or 212, 221, 222, 230 or 240 and 270. Students who place in FREN 301 in the placement test will complete only FREN 230/240 and FREN 270 prior to acceptance in the program. For a degree in French, the following courses are required.

Lower Division Requirements
all of
FREN 210-3 Intermediate French I*
FREN 211-3 Intermediate French II* (or 212)
FREN 221-3 French Writing I*
FREN 222-3 French Writing II*
FREN 270-3 Introduction to French Linguistics I
one of
FREN 230-3 Introduction to French-Canadian Literature
FREN 240-3 Introduction to French Literature: Modern French Literature
*exemption is gained by successful completion of a more advanced French language course. Lower division language courses may be challenged if students wish to receive credit for these courses (see above).

Upper Division Requirements
Major
FREN 301-3 Advanced French Composition
FREN 360-4 Intermediate French Literature
FREN 370-4 Introduction to French Linguistics II
A further 21 credit hours of French, to be chosen from among the remaining courses at the 300 and 400 division, must be completed.
Note: A minimum of 12 of the remaining 21 credit hours must be from 400 division French courses.
Honors
FREN 301-3 Advanced French Composition
FREN 360-4 Intermediate French Literature
FREN 370-4 Introduction to French Linguistics II
A further 39 credit hours of French, to be chosen from among the remaining courses at the 300 and 400 division, must be completed.
Note: A minimum of 24 of the remaining 39 credit hours must be from 400 division French courses, including the following which should be taken during the last terms of study.
FREN 491-3 Readings in French Linguistics and/or Literary Criticism
FREN 492-3 Honors Essay
In addition, the honors student must acquire proficiency (i.e. the equivalent of two terms) in another language in addition to English and French.

Extended Minor
Students must complete
FREN 301-3 Advanced French Composition I
and one of
FREN 360-4 Intermediate French Literature
FREN 370-4 Introduction to French Linguistics II
A further nine credit hours of French, to be chosen from among the remaining courses at the 300 and 400 division, must be completed.

French Language Cohort Program in Public Administration and Community Services
Extended Minor
Students must complete
FREN 301-3 Advanced French Composition
and one of
FREN 425-3 Topics in the Varieties of French
FREN 452-3 Topics in French Cultures
A further nine credit hours of French, to be chosen from among the remaining courses at the 300 and 400 division, must be completed. (FREN 360 and/or 370 may be taken in partial fulfillment of this requirement.)

For further information about this program, its requirements and alternatives, see “Political Science Major, French Extended Minor Program Requirements” on page 178.

Courses in French
Courses are offered in the following fields.

French Language
FREN 120-3 French for Beginners
FREN 121-3 Introductory French I
FREN 122-3 Introductory French II
FREN 199-3 Writing French I: Spelling and Grammer*
FREN 210-3 Intermediate French I
FREN 211-3 Intermediate French II
FREN 212-3 French for Immersion Program Students
FREN 213-3 Intermediate French Language: Oral Practice
FREN 217-3 French Pronunciation
FREN 221-3 French Writing I
FREN 222-3 French Writing II
FREN 223-3 Topics in French Language
FREN 299-3 Writing French II: Intermediate Compositon*
FREN 300-3 Advanced French: Oral Practice
FREN 301-3 Advanced French Composition
FREN 304-3 Advanced French Grammar
FREN 307-3 French Vocabulary
*restricted entry to these distance education courses

French Linguistics
FREN 301, 304 and 307 represent the formal culmination (but not the end) of the student’s training in French language use. FREN 270 and 370 represent the bridge between this knowledge of French (i.e. ability to use) and a knowledge about French (i.e. how to approach, analyse and describe various linguistic aspects of the French language). These latter concerns form the central objectives of the 400 division French linguistics courses. Topics courses may be taken more than once for credit, provided that the content is different each time.

Linguistic Theories
FREN 270-3 Introduction to French Linguistics I
FREN 370-4 Introduction to French Linguistics II
FREN 424-3 Topics in French Linguistics
Structure of French
FREN 411-3 Aspects of French Morphology
FREN 412-3 Aspects of French Syntax
FREN 413-3 Aspects of French Phonetics and Phonology
FREN 415-3 Aspects of French Semantics and Lexology
Evolution of French
FREN 423-3 Topics in the History of French
French Dialects
FREN 425-3 Topics in the Varieties of French
French Applied Linguistics
FREN 416-3 French Applied Linguistics
French Literature
200 Division Courses
FREN 240 and 230 introduce basic concepts and methods of literary analysis and sociocultural background of a few short modern French and French Canadian fiction, drama and poetry works. They also improve language competence: all lectures, class discussions and assignments are in French. FREN 230 or 240 are prerequisites for FREN 360.

300 Division Courses
FREN 360 continues the introduction to the textual analysis of literary texts (fiction, drama and poetry) offered in 240, 230. The historical background of the works selected from the Middle Ages to the 19th century is also discussed. FREN 360 is a prerequisite for all 400 division French literature courses.

400 Division Courses
These courses study specific literary movements or genres through various critical approaches: thematic or structural. The emphasis is on close textual analysis rather than literary history.

400 Division Courses on Literary Movements and Periods
FREN 461-3 French Medieval Literature
FREN 462-3 French Renaissance Literature
FREN 463-3 Literature of the Seventeenth Century
FREN 465-3 Literature of the Eighteenth Century
FREN 467-3 Romanticism
FREN 470-3 Realism to Naturalism
FREN 476-3 Interdisciplinary Approaches to French Studies

400 Division Courses on Genres
FREN 430-3 Topics in French-Canadian Literature
FREN 472-3 The Contemporary Theatre
FREN 474-3 French Poetry
FREN 479-3 The Contemporary Novel

French Linguistics/Literature
The following courses are for students who, once they have acquired a sufficient background in linguistics and literary criticism, wish to explore the relationship between the two disciplines.

FREN 410-3 French Stylistics
FREN 480-2 Seminar I
FREN 491-3 Readings in French Linguistics and/or Literary Criticism
FREN 492-3 Honors Essay

French Civilization and Cultures
FREN 330-3 Francophone World
FREN 452-3 Topics in French Cultures

Other Course(s)
The following is taught in English and available to students who do not wish to specialize in French.

FREN 198-3 French for Reading Knowledge I

Joint Major in French and English Literatures
The joint major is an interdisciplinary program, usually within a BA, designed for students who are interested in exploring the many close relationships between English and French literatures.

Advisors
Ms. B. Harrison, Department of French, 2630 Diamond Building, 778.782.4505
Ms. K. Ward, Department of English, 6133 Academic Quadrangle, 778.782.4835

Lower Division Requirements
Students must complete the same lower division prerequisites as for both English and French majors.

French (15 credit hours)
all of
FREN 210-3 Intermediate French I
FREN 211-3 Intermediate French II
FREN 221-3 French Writing I
FREN 222-3 French Writing II
(or exemption from all of FREN 210, 211, 221, 222) and one of
FREN 230-3 Introduction to French-Canadian Literature
FREN 240-3 Introduction to French Literature: Modern French Literature

Recommended
FREN 270-3 Introduction to French Linguistics I
English
Students must complete the lower division requirements of the English major program.

Upper Division Requirements
Students must complete 22 upper division credit hours in French and 20 upper division credit hours in English to achieve a specialization in literary studies as well as a selection of complementary courses as follows.

French
FREN 301-3 Advanced French Composition
FREN 360-4 Intermediate French Literature
7 credit hours
7 credit hours
plus one of
FREN 300-3 Advanced French: Oral Practice
FREN 304-3 Advanced French Grammar
FREN 307-3 French Vocabulary
FREN 330-3 Francophone World
FREN 370-4 Introduction to French Linguistics II
plus 12 credit hours from the 400 division French Literature courses.

The following courses are recommended if the student is interested in the linguistic analysis of literary texts.

FREN 370-4 Introduction to French Linguistics II
FREN 410-3 French Stylistics

English
Please refer to the Department of English.

History
Please refer to the Department of History.

Political Science
Students must take 12-15 lower division credit hours and at least 16 upper division political science credit hours. Choose courses in consultation with the political science student advisor or the representative of the Department of Political Science on the program steering committee after reviewing the Guidelines for Course Selection. Such choices must fit with the thematicity criteria of the joint major to the satisfaction of the steering committee.

French
Students must acquire an appropriate degree of proficiency in both oral and written French. In order to achieve this, a certain number of French language courses are required. Exemption from one or more French language courses can be obtained through a placement test administered by the Department of French. The course challenge procedure may also be used to fulfill lower division language requirements in part or in full.

Lower Division
FREN 210-3 Intermediate French I (or exemption)
FREN 211-3 Intermediate French II (or exemption)
FREN 221-3 French Writing I (or exemption)
FREN 222-3 French Writing II (or exemption)

one of
FREN 230-3 Introduction to French-Canadian Literature
FREN 240-3 Introduction to French Literature: Modern French Literature
FREN 270-3 Introduction to French Linguistics I

Suggested
FREN 215-3 French Language: Oral Practice

Upper Division
FREN 301-3 Advanced French Composition
one of
FREN 360-4 Intermediate French Literature
FREN 370-4 Introduction to French Linguistics II

Note: Students wishing to complement this joint major specialization with greater competence in oral and written French may take FREN 300 or 330 and

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FREN 304 in addition to the above requirements.
FREN 330 is highly recommended.

At least nine hours must be at the 400 division.

Students may choose courses in consultation with the
Department of French student advisor or the
representative of the Department of French on the
program steering committee.

Joint Major in French and
Humanities

See "Department of Humanities" on page 166.

Certificate in French Language
Proficiency

This program is for students who may or may not be
enrolled in a degree program and who wish to
improve oral and written French proficiency. It is also
for those wishing to enhance their knowledge of the
language for cultural or professional needs. The
program is not intended for native speakers of French.

Recommendations for the award of the certificate will
be made by the Department of French and the
Faculty of Arts and Social Sciences.

Admission Requirements

Normal admission regulations to Simon Fraser
University will apply.

Requirements

Students must successfully complete 30 credit hours,
of which 21 hours are earned by completing seven
required courses. The remaining nine credit hours
may be selected from any other French courses,
excluding FREN 120, 121, 122, 198, and 342.

all of
FREN 210-3 Intermediate French I
FREN 211-3 Intermediate French II (or 212)
FREN 215-3 Intermediate French Language: Oral
Practice
FREN 221-3 Writing French I
FREN 222-3 Writing French II
FREN 301-3 Advanced French Composition
one of
FREN 230-3 Introduction to French-Canadian
Literature
FREN 240-3 Introduction to French Literature:
Modern French Literature

Recommended
FREN 300-3 Advanced French: Oral Practice
FREN 330-3 The Francophone World
FREN 304-3 Advanced French Grammar

The program normally takes 5-6 terms to complete.
A minimum GPA of 2.5 is calculated on all Simon Fraser
University courses that are applied to the certificate.
Duplicate courses are counted only once.

Note: It is possible to obtain exemption, up to a
maximum of 12 credit hours, from lower division
French language courses by placing in a more
advanced French language course. Exempted
courses must be replaced with credit obtained by
• approved transfer credit for French courses taken at
another post-secondary institution (subject to
University regulations governing the approval of
transfer credit), up to a maximum of six credit hours
• challenge credit for exempted courses (subject to
University regulations governing approval of
challenge credit), up to a maximum of six credit hours
• successful completion of other French courses at
Simon Fraser University, excluding FREN 120, 121,
122, 198, and 342.

Students who gain, or hope to gain, exemption should
consult the advisor early in their program. In
accordance with regulations governing certificate
programs (see “Certificate Program” on page 7),
credit hours accumulated toward the certificate
program may be applied also to major programs or
extended minor programs or to a bachelor’s degree.

Post Baccalaureate Diploma in
French and Education

The Department of French and the Faculty of
Education jointly offer this post baccalaureate
diploma comprising a set of organized courses for
practising or future French teachers. This program
includes courses closely related to the pedagogy of
French as a second language as well as courses
enhancing previous French language competence, or
knowledge of French literature or linguistics.

Admission Requirements

Students must seek admission or readmission to the
University and, once admitted, must separately apply
to the Department of French advisor for diploma
program admission. Qualifications for application to
the program include the following:
• The completion of a recognized bachelor’s degree
with a minimum graduation grade point average of
2.0 from institutions with British Columbia and 2.4
from institutions outside the province. University
course work undertaken subsequent to the
bachelor’s degree will also be considered for
admissibility to this diploma program.
• A demonstrated knowledge of spoken and written
French e.g. competence equivalent to successful
completion of FREN 222.

Application packages are available from the
Department of French and the Faculty of Education.
Before applying, consult with the student advisor in the
Department of French, Ms. B. Harrison,
778.782.4505.

Program Requirements

Students must successfully complete an approved
program comprised of at least 30 upper division credit
hours. Graduate courses may be taken with prior
approval. Normally 15 credit hours will be completed
from each of the French and education lists of
courses below. A minimum cumulative GPA of 2.5 is
necessary for courses applied toward the diploma.

The diploma must be completed within five years of
program admission. Teachers seeking a
reclassification should note that, since integrated
programs are looked upon as upgrading work, all
courses in such programs must be taken no more
than 10 years before the date of reclassification
through the Teachers’ Qualification Service.

Formal application for graduation is made through
Student Services. Deadlines for submission of
application to graduate are outlined in the “Academic
Calendar of Events” on page 12.

Transfer Credit

Transfer credit for course work in education and/or in
French may be considered to fulfill requirements for
this program. A maximum of six transfer credit hours
in each of French and education may be awarded.

French Requirements

Students normally choose 15 credit hours from
the following courses:
A minimum of two of
FREN 304-3 Advanced French Grammar
FREN 307-3 French Vocabulary
FREN 416-3 French Applied Linguistics

The remaining credit hours may be selected from 300
and 400 division French courses with the exception of
FREN 342.

Please note that all course selections must be
approved by the advisor in the French department.

Students with credit for the above courses or
equivalents must select approved substitutes from
upper division French courses. Students with no
previous undergraduate courses in French linguistics
or French literature must take the lower division
prerequisites FREN 270 and/or FREN 230/240.

Education Requirements

Students normally choose 15 credit hours from
among the following courses, including both of
EDUC 411-4 Multicultural Education
EDUC 450-4 French Curriculum Studies

The remaining credit hours may be chosen from
EDUC 325-3 Assessment/Classroom Teaching
EDUC 326-3 Classroom Management and Discipline
EDUC 384/385 Special Topics*
EDUC 451-4 Classroom French Curriculum Practices
EDUC 472-4 Language Arts
EDUC 473-4 Reading**
EDUC 474-4 Social Studies
EDUC 475-4 Mathematics
EDUC 476-4 Natural Sciences
EDUC 480-4 French as a Second Language
EDUC 481-4 French Immersion and
Programme-cadre de Français***

*courses offered in French during summer institutes
**this course may be substituted with EDUC 826 if
EDUC 473 has already been taken (special
permission required).
***this course may be substituted with EDUC 858 if
EDUC 481 has already been taken (special
permission required).

Co-operative Education

The department offers co-op education courses to
those meeting the Faculty of Arts and Social Sciences
Co-operative Education program requirements, and
who want practical experience related to their French
studies. The program entails planned study terms and
employment. See page 395 for course descriptions
for FRNS 185, 285, 385, and 485.

Italian Courses

Italian courses are administered by the Department of
French. For courses, see “Italian ITAL” on page 420.

Students with a competence in the language beyond
the division of the course in which they are enrolled
will be required to withdraw. Students who are unsure
of their language division are responsible for
proficiency assessment prior to course enrollment.
Consult the Department of French advisor or inquire
at the general office for the procedure to be followed.

Certificate in Italian Studies

The certificate requires a minimum of 30 credit hours
comprising both lower and upper division courses. A
maximum of six transfer credit hours may be counted
against this certificate (up to six credit hours of
100-division Italian language courses or up to six
assigned transfer credit hours in Humanities, History
or FPA courses or a combination thereof). This
program serves full and part time students and those
seeking educational enrichment in areas related to
the establishment and evolution of Italian Humanism
from the early Renaissance to Modern times. This
certificate may be completed concurrently with and
complements major/minor programs in areas such as
French, Humanities, History and Contemporary Arts.
The certificate requires basic proficiency in Italian language (writing, reading and oral skills). It is intended for students wishing to pursue further studies in literature, history and the arts. It may be taken in conjunction with a degree program. Those students planning to obtain a BA within the Faculty of Arts and Social Sciences may complete the certificate in such a way that some of the Faculty of Arts and Social Sciences breadth requirements are fulfilled by the same courses. Courses used towards the certificate may also be used towards majors or minors.

Program Requirements

Students must complete 15 credit hours in Italian language instruction including
ITAL 100-3, 301-3, 200-3, 201-3, 300-3
and a minimum of 15 more credit hours to be selected from
FPA 337-3 Intermediate Selected Topics in Film and Video Studies*
FPA 436-3 Advanced Seminar in Film and Video Studies*
FREN 461-3 French Medieval Literature
FREN 462-3 French Renaissance Literature
HIST 402-4 Renaissance Italy
HUM 303-4 The Latin Humanist Tradition
HUM 305-4 Medieval Studies
HUM 311-4 Italian Renaissance Humanism
HUM 312-4 Renaissance Studies
HUM 320-4 The Humanities and Philosophy
*providing that content of the course covers primarily Italian language and film.

Note: Some of the above courses have specific prerequisites. It is the student’s responsibility to ensure that all prerequisites are met for upper division courses listed in this program.

Department of Geography

7123 Robert C. Brown Hall, 778.782.3321 Tel, 778.782.5841 Fax, www.sfu.ca/geography
Chair
E.J. Hickin BA, PhD (Syd), PGeo

Professors Emeriti

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G.B. Cramton BSc, PhD (Bristol)
A. MacPherson MA (Edin), FRMetS
T.K. Poiker PhD (Heidelberg)
M.C. Roberts BSc (London), MA (Tor), PhD (Iowa), PGeo
P.L. Wagner AB, MA, PhD (Calif)
J.W. Wilson BSc (Glas), MSc (MIT), MPP
(N Carolina)
S.T. Wong AB (Augustana, Ill), AM (Yale), PhD (Chic)

Professors

N.K. Blomley BSc, PhD (Bristol)
A.M. Gill BA (Hull), MA (Alta), PhD (Manit)**
R. Hayter BA (Newcastle, UK), MA (Alta), PhD (Wash)
E.J. Hickin BA, PhD (Syd), PGeo
I. Hutchinson BA (Liv), MSc (McG), PhD (S Fraser)
J.T. Pierse BA (Tor), MA (Wat), PhD (Lon)***
A.C.B. Roberts BA (Tor), MA (Wat), PhD (York, Can)
M.L. Roseland, BA MA (Wesleyan, Conn), PhD (Br Col)

Associate Professors

T.A. Brennand MA (Camb), PhD (Alta)
J.A.C. Brohmam BA (Car), MA, PhD (Calif)
R.A. Clapp BA (Yale), MA, PhD (Calif)
S. Dragicevic BEng (Belgrade), MSc (Belgrade), PhD (Montre)
J. Hyndman BA (Alta), MA (Lanc), PhD (Br Col)
L.F.W. Lesack BSc (Manit), PhD (Calif)***
M.G. Schmidt BSc (Guelph), MSc (Lakehead), PhD (Br Col)
J. Taylor BS, MA (Ore), PhD (Wash), Canada Research Chair***
Assistant Professors
V.A. Crooks BA (Wont), MA, PhD (McM)
M.F. Garvert BA (Collge), PhD (Wash)
N. Hedley BSc (Lanc), MA (Colorado), PhD (Wash)
M. Holden BSc (Vic, BC), MS (Rutgers), PhD (NY State)***
P.T. Kingsbury BA (Wales), MA, PhD (Kentucky)
G.P. Mann BA (McGill), MSc (Guelph), PhD (Calif)
E. McCann MA (Glas), MA (Miami, Ohio), PhD (Kentucky)
N.C. Schuuerman BSc (Nfld), MA, PhD (Br Col)
J. Sturgeon BA (Calif), MA, (Wash), PhD (Yale)
I. Tromp-van Meerveld BSc, MSc (Vrije, Amsterdam),
PhD (Oregon State)
J. Venditti BSc (Guelph), MSc (S Calif), PhD (Br Col)

Senior Lecturers
O. Hertzman, BASc, MSc (Br Col), PhD (Wash)
I. Winton MA (Glas), MA (Br Col), PhD (Minn)

Associate Members
W.G. Gill, Vice-President, University Relations
M.V. Hayes, Health Sciences

Adjunct Professors
O. Lian BSc, MSc (S Fraser), PhD (Wont)
L.B. McArthur BSc (McM), MSc (Br Col), PhD (McM)

Advisor
Ms. R. Multani, 7126 Robert C. Brown Hall, 778.782.4529

*joint appointment with biological sciences
**joint appointment with resource and environmental management
***joint appointment with history
****joint appointment with urban studies

The Department of Geography offers a program of study within the Faculty of Arts and Social Sciences leading to the degree of bachelor of arts. Students interested in a geography bachelor of science should see “Geography” on page 228.

Supporting Courses Outside Geography

Students will profit greatly by selecting a wide range of subjects outside geography. Economics, sociology and anthropology, political science, history, and many areas in the Faculty of Science can be of great value to the prospective geographer. Students may wish to complete a minor in one of these fields. Any geography faculty member will be pleased to advise. Students with credit or claiming advanced standing in geography should consult the department advisor concerning the structure of their programs.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

BA Major Program

Students must fulfill the requirements of the Faculty of Arts and Social Sciences. See “Bachelor of Arts Degree” on page 130. Transfer students may enter the program without having fulfilled all lower division requirements. See the departmental advisor as soon as possible about entering the program.

Lower Division Requirements

Students must complete all of
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
and one of
GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Biogeography
and one of
GEOG 251-3 Quantitative Geography
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I

18 credit hours

Upper Division Requirements

Students are expected to consult with a departmental advisor when they formally declare a major in Geography. Those who do not seek advice from the department run a risk of prolonging their programs.

Students must complete a total of 32 credit hours of 300 and 400 division courses in geography, including at least eight credit hours at the 400 division and one of the following:
GEOG 311-4 Hydrology I
GEOG 312-4 Geography of Natural Hazards
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 317-4 Soil Science

32 credit hours

Geography – Environmental Specialty Major Program

Lower Division Requirements

Students must complete
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
GEOG 215-3 Biogeography
GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
and one of
GEOG 251-3 Quantitative Geography
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I

and the following two trans-disciplinary core courses
EVSC 203-3 Introduction to Environmental Science
REM 100-3 Global Change

24 credit hours

Upper Division Requirements

Students must complete the following core courses.
GEOG 322-4 Industrial Change and Local Development
GEOG 327-4 Environmental History
GEOG 389W-4 Human Ecology: Human Relations to Nature
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Institutional Arrangements for Sustainable Environmental Management

18 credit hours

plus two of
GEOG 326-4 Industrial Change and Local Development
GEOG 328-4 World Forests
GEOG 432-4 Problems in Environmental History
GEOG 445-4 Resource Planning
GEOG 449-4 Environmental Processes and Urban Development
GEOG 458-4 Society and Environment in China
REM 445-3 Environmental Risk Assessment
REM 471-3 Forest Ecosystem Management

6-8 credit hours
plus one of
GEOG 311-4 Hydrology I
GEOG 312-4 Geography of Natural Hazards
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 317-4 Soil Science I 4 credit hours

plus one of
GEOG 351-4 Cartography and Visualization
GEOG 352-4 Spatial Analysis
GEOG 353-4 Remote Sensing
GEOG 355-4 Geographical Information Science II 4 credit hours

Students must complete an additional four upper division (300 and 400 division) credit hours in geography for a minimum total of 36 credit hours. Total 36-38 credit hours

Geographic Information Science Program
This program is offered jointly by the School of Computing Science and the Department of Geography. Students may pursue major or honors options leading to the BSc or BSc(Hons) degrees under the Faculty of Applied Sciences. See "Geographic Information Science Program" on page 122 for admission requirements.

BA Honors Program
Students must complete all the requirements for the major program (see above) plus a minimum of 10 additional credit hours from courses in the 300 and 400 division listings in Geography, and the following courses.
GEOG 301-4 Geographic Ideas and Methodology
GEOG 491-4 Honors Essay 18 credit hours
A total of 132 term hours is required of which 60 must be at the upper division. To graduate with honors, students must have grade point averages of not less than 3.00. See "Grade Point Averages Needed for Graduation" on page 35.
Entry into the honors program requires the approval of the department and admission GPAs of 3.00.

Geography – Environmental Specialty Honors Program
Students must complete all environmental specialty major requirements (see above) plus four to six additional 400 division geography credit hours and GEOG 301-4 Geographic Ideas and Methodology GEOG 491-4 Honors Essay for a minimum total of 50 upper division credit hours. A total of 132 credit hours is required for honors, of which 60 must be upper division. To graduate with honors, students must have grade point averages of not less than 3.00. See "Grade Point Averages Needed for Graduation" on page 35.
Entry into the honors program requires the approval of the department and admission GPAs of 3.00.

BA Minor Program
Students are expected to consult with a departmental advisor when they formally declare a minor in geography. Those who do not seek advice from the department run a risk of prolonging their programs.

Lower Division Requirements
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography

and one of
GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
and one of
GEOG 251-3 Quantitative Geography
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I 12 credit hours

Upper Division Requirements
Students must complete a minimum of 15 credit hours in GEOG courses numbered 300 and 400.

Extended Minor Program
Students are expected to consult with a departmental advisor when they formally declare an extended minor in geography. The program consists of the lower division requirements for a major and the upper division requirements for a minor (see above).

Joint Major in Geography and Business Administration
See "Joint Major in Business Administration and Geography" on page 196 for requirements.

Joint Major in Geography and Latin American Development Studies
See "Joint Major Programs" on page 136.

Joint Major in Geography and Economics – Environmental Specialty

Lower Division Requirements
Economics Students must complete the same requirements as for the economics major program and also complete ECON 260; the latter course can be counted as one of the 200 division requirements.
Geography Students complete the same requirements as for the geography – environmental specialty major program.

Upper Division Requirements
Economics Students must complete 25 credit hours in economics including
BUEC 333-4 Statistical Analysis of Economic Data
ECON 301-5 Microeconomic Theory I: Competitive Behaviour
ECON 305-5 Intermediate Macroeconomic Theory
ECON 362-4 Economics of Natural Resources
and at least one 400 division ECON or BUEC course (excluding ECON 431, 435, BUEC 433 and 485) and, to satisfy economics group requirements, at least one of the following.
ECON 102-3 The World Economy
ECON 104-3 Economics and Government
ECON 110-3 Foundations of Economic Ideas
ECON 208-3 History of Economic Thought
ECON 250-3 Economic Development in the Pre-Industrial Period
ECON 309-5 Introduction to Marxian Economics

ECON 353-4 Economic History of Canada
ECON 354-3 Comparative Economic Institutions
ECON 355-4 Economic Development
ECON 404-3 Methodology of the Social Sciences
ECON 409-3 Seminar in Economic Thought
ECON 450-3 Seminar in Quantitative Economic History
ECON 451-3 Seminar in European Economic History
ECON 452-3 Seminar in Economic Prehistory
ECON 453-3 Seminar in the Economics of Education
ECON 455-3 Seminar in Economic Development

Geography
Students must complete 24 credit hours in geography including
GEOG 322-4 World Resources
GEOG 382-4 Population Geography

plus one of
GEOG 323-4 Industrial Location
GEOG 383-4 Regional Development and Planning I
GEOG 385-4 Agriculture and the Environment
GEOG 386-4 Geography, Health and Health Care
plus three of
GEOG 422-4 Theories and Practices of Development
GEOG 426-4 Industrial Change and Local Development
GEOG 444-4 Regional Development and Planning II
GEOG 449-4 Environmental Processes and Urban Development
plus the following five core courses
GEOG 389-4 Human Ecology: Human Relations to Nature
GEOG 428-4 World Forests
GEOG 445-4 Resource Planning
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Institutional Arrangements for Sustainable Environmental Management

Breadth Requirements
The following courses are recommended to fulfiI the Faculty of Arts and Social Sciences breadth requirements.
ARCH 201-3 Introduction to Archaeology
ARCH 365-3 Ecological Archaeology
ARCH 386-3 Archaeological Resource Management
CMNS 347-4 Communication in Conflict and Intervention
CMNS 445-3 The Communication of Science and the Transfer of Technology
HUM 325-4 The Humanities and the Natural World
PHIL 120-3 Introduction to Moral Philosophy
PHIL 144-3 Introduction to the Philosophy of Natural and Social Science
SA 371-4 The Environment and Society

Languages Other Than English
Some graduate schools require some proficiency in a language other than English. Students who contemplate graduate studies should complete language courses other than English.

Certificate in Spatial Information Systems

Admission Requirements
Students should consult with the advisor as early as possible for program admission. Formal approval is required before completion of the certificate. Credit hours applied to one certificate may not be applied to another Simon Fraser certificate or diploma.

Requirements
To qualify for the certificate, students must complete the following courses (or their equivalents from another department or institution).
Co-operative Education

This program integrates workplace learning with academic studies. Students alternate academic terms with four full-time paid work terms. Apply to co-op education as early as possible in your academic career to facilitate optional scheduling.

To enter the program, geography students must have a minimum of 2.75 cumulative grade point average (CGPA), and must maintain a 2.5 CGPA to continue in the program. University and college transfers who have previously participated in co-op elsewhere may be credited with the term(s) already taken.

To enrol, students should attend a co-op information session that is held during the first week of classes every term or visit the environment co-op coordinator. For further information and contact details, please visit http://www.sfu.ca/coop/science. Please note that geography BA majors are managed within the Science and Environment Co-op Program and not through Arts and Social Sciences Co-op.

Department of Gerontology

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Chair
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Professor Emerit
G.M. Gutman BA (Br Col), Alta, PhD (Br Col)

Associate Professor
H. Chaudhury BA (B'desh Engin), MSc Architecture

L. Lovegreen BA (B Wallace), MA, PhD (Case W Reserve)

N. O'Rourke HBBA (W'Laur), MA (Br Col), PhD (Ott)

Adjunct Professors
K. Anderson MSW, BSc (Calg)

B. Birch BASc, PhD (Br Col)

S. Brink BA (Madr), MSc, PhD (Purdue)

M. Carr BN Nursing (MCG), MSc (CHHS)

S. Crawford BHE (Br Col), MSc (Lond), PhD (S Fraser)

S. Cusack BA, MA, PhD (S Fraser)

V. Doyle BA (Vic, BC), EdM (Harv), PhD (S Fraser)

E. Gallagher BSc Nursing (Windsor), MSc Nursing (Duke), PhD (S Fraser)

J. Gray BA, MA (Cant), PhD (Lond)

M. Hollander MSc (Br Col), PhD (Vic, BC)

H. Kennedy-Symonds BSc (Brandon), MHSc (McM), RN (Brandon)

A. Mahmood BAr (Bangladesh), MSc (Missouri), PhD (Wis)

L. McDonald-Miszcza BA (Alta), MA, PhD (Vic, BC)

A. Mihailescu BASc, MASc (Tor), PhD (Strath)

D. Robertson BSc (U. of Durham, UK), MD (Newcastle, UK)

J. Small BA (New Mexico), BA (Central Wash), PhD (Calif)

C. Spencer BA (Calif), LLB, LLM (Sask)

B. Woroford BSW, MSW (Br Col)

L. Young BSN, MSN, PhD (Br Col)

Advisor
Ms. A. Barrett, 2800 Simon Fraser University Vancouver, 778.782.5068

Additional courses from various departments are designated for inclusion in the minor. A list is available from the Gerontology Program. A maximum of six credit hours of designated courses may be applied toward the minor with prior approval from the program advisor. Candidates intending to apply for admission to the Post Baccalaureate Diploma in Gerontology or to the master's program should contact the program advisor before selecting courses for the minor.

Post Baccalaureate Diploma

This program is for those with a bachelor's degree who are working or plan to work with the elderly. It provides a broadly based, multidisciplinary perspective on aging as well as requisite knowledge.
and skills for meaningful intervention and application of research findings to practice. For information about the program’s general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Admission Requirements
- completion of a bachelor’s degree from a recognized university with a minimum graduation grade point average of 2.5.
- three reference letters attesting to personal qualities and characteristics, ability to complete a post baccalaureate program and career potential and dedication to the gerontology field. Obtain an application package from the program office including letter of reference forms, program information and a separate application to the Gerontology Diploma Program.

Program Requirements
Successful completion of 32 approved credit hours, 20 of which are earned by completing the six required courses below is required. The remaining 12 credit hours are from the specified list of optional courses. 

A 2.5 CGPA is required on courses applied toward the diploma. Students entering without experience of working directly with older persons in a job or volunteer setting may be required to complete a practicum. Some organizations may require a criminal record check prior to starting the practicum.

Applications are also available at www.sfu.ca/gerontology.

Required Courses
GERO 300-3 Research Methods in Gerontology
GERO 400-4 Seminar in Applied Gerontology
GERO 420-4 Sociology of Aging
KIN 461-3 Physiological Aspects of Aging
PSYC 357-3 Adulthood and Aging
SA 420-4 Sociology of Aging

Optional Courses
EDUC 351-3 Teaching the Older Adult
GERO 302-3 Health Promotion and Aging
GERO 401-3 Environment and Aging
GERO 402-3 Drug Issues in Gerontology
GERO 403-3 Counselling Issues with Older Adults
GERO 404-3 Health and Illness in Later Life
GERO 406-3 Death and Dying
GERO 407-3 Nutrition and Aging
GERO 408-4 Families over the Life course
GERO 409-3 Mental Health and Aging
GERO 410-3 Special Topics in Gerontology I
GERO 411-3 Special Topics in Gerontology II
GERO 412-3 Special Topics in Gerontology III
GERO 414-4 Special Topics in Gerontology IV
GERO 435-3 Adult Guardianship Law
SA 319-4 Culture, Ethnicity and Aging

Notes:
Most diploma program courses have prerequisites. A student who has not completed appropriate prerequisites may be required to do so before enrolling in the diploma program courses. Contact the program advisor for information on prerequisites and general program requirements.

Students should take GERO 300 and 301 when they begin the program, and GERO 400 near the end. Students may choose PSYC 301, SA 355 or any other approved courses in research methodology as an alternative to GERO 301; however, only one of these courses may be applied toward the diploma. 
Courses other than above may be designated for gerontology diploma credit from term to term. Check with the program for listings.

Department of History
6026A Academic Quadrangle, 778.782.3521 Tel, 778.782.5837 Fax, www.sfu.ca/history

Chair
J.S. Craig BA, MA (Car), PhD (Camb), FRHistS

Professors Emeriti
R.E. Boyer BA (Westmont), MA (Wash), PhD (Conn)
C.R. Day BA (Stan), MA, PhD (Harv)
R.K. Debo BA, MA, PhD (Nebraska)
D. Gagan BA, MA (WOnt), PhD (Duke)
E.R. Ingram MA (Oxf), PhD (Lond), FRHistS
H.J.M. Johnston BA (Tor), MA (WOnt), PhD (Lond)
J.M. Kitchen BA, PhD (Lond), FRHistS, FRSCan
R.C. Newton BA (Rutgers), MA, PhD (Flor)

Professors
L. Cormack BA (Calg), MA, PhD (Tor)
J.S. Craig BA, MA (Car), PhD (Camb), FRHistS
A. Gerolymatos BA (C’dia), MA, PhD (McG), Hellenic Canadian Congress of BC Chair in Hellenic Studies
M. Leier BA, MA (S Fraser), PhD (Nfld)
J. Little BA (Bishop’s), MA (New Br), PhD (Ott)
H. Pabel BA, MA (Tor), PhD (Yale)
J.O. Stubs BA (Tor), MSc (Lond), DPhil (Oxf)

Associate Professors
A. S. Dawson BA, MA (Calg), PhD (NY State)
K. Ferguson BA (McG), MA, PhD (Duke)**
M.E. Kelm BA, MA, PhD (Tor), Canada Research Chair
D. N. MacLean BA (NY State), MA, PhD (McG)
A. Seager BA, MA (McG), PhD (York, Can)
J. Taylor BA, MA (Ore), PhD (Wash), Canada Research Chair

Assistant Professors
F. Becker BA (Humboldt), MA (Lond), PhD (Camb)
E. Chenier BA (York), MA, PhD (Qu)
L. Clossey BA, MA, PhD (Calif)
A. Ede BA (York), MA, PhD (Tor)
J. Evelyn MA, PhD (Leiden)
A. Geiger BA, MA, ABD (Washington)
N. Guyatt BA, MA (Camb), PhD (Pinn)
W. Keough BEd, BA, PhD (Nfld)
D. Krallis BA (Athens), MA (Oxf), PhD (Mich)
T. Kühn MA (Freiburg), MA, PhD (NY)
J. Matsurama BA (Tor), MA, PhD (York, Can)
E. O’Brien BA (Tor), MA, PhD (Brown)**
R. Panchasi BA (C’dia), PhD (Rutgers)
H. Pohlant-McCormick BA (LMaximilians), MA, PhD (Minn)
N. Roth BA (Regina), MA, PhD (Calg), PhD (Tor)
P. Sedra BA (Pin), MA, PhD (NY)
I. Vinkovskaya BA (Wesleyan, Conn), MA, PhD (Calif)

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Ms. T. Wright BA (S Fraser), 6025 Academic Quadrangle, 778.782.3446

*joint appointment with geography
**joint appointment with humanities
**joint appointment with urban studies

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 132.

Major Program
Lower Division Requirements
To enter the major, students must complete 18 credit hours of 100 and 200 division history courses. 

One hundred and 200 division courses introduce students to the four groupings of history course offerings: the history of the Americas; European history; the history of Africa, the Middle East, and Asia; and Global/Comparative history.

Students entering 400 division seminars should have an appropriate background in 100, 200 division and/or 300 division history. Normally, students should complete 45 credit hours (or equivalent) prior to enrollment in any upper division history course.

Students should plan lower division work with upper division requirements in mind. The program offers a wide range of courses in the four groups at the lower division, providing ample opportunity for a broad curriculum introduction. A careful selection of lower division courses lays the foundation for specialization in specific upper division areas. For this reason, students should take at least one course from at least three of the four groups of lower division courses.

Group 1 – Europe
HIST 106-3 The Making of Modern Europe
HIST 215-3 The Making of the British Isles
HIST 220-3 Late Medieval and Renaissance Europe
HIST 223-3 Early Modern Europe, 1500-1789
HIST 224-3 Europe from the French Revolution to the First World War
HIST 225-3 20th Century Europe

Group 2 – The Americas
HIST 101-3 Canada to Confederation
HIST 102-3 Canada Since Confederation
HIST 104-3 The Americas from Colonization to Independence
HIST 201-3 The History of Western Canada
HIST 204-3 The Social History of Canada
HIST 208-3 Latin America: the Colonial Period
HIST 209-3 Latin America: the National Period
HIST 212-3 The United States to 1877
HIST 213-3 The United States since 1877

Group 3 – Africa, Middle East, Asia
HIST 146-3 Africa after the Transatlantic Slave Trade
HIST 151-3 The Modern Middle East
HIST 205-3 Premodern Japan
HIST 206-3 Modern Japan
HIST 231-3 History of Africa to the 19th Century: From Ancient Times to the Slave Trade
HIST 249-3 Classical Islamic Civilization
HIST 252-3 Islamic India
HIST 254-3 China to 1800
HIST 255-3 China Since 1800

Group 4 – Global/Comparative
HIST 104-3 The Americas from Colonization to Independence
HIST 130-3 Modern World History
HIST 208-3 Latin America: the Colonial Period
HIST 249-3 Islamic Civilization

Note: Candidates for a history major may count one or both of WS 201 and 202 towards the required 18 lower division history credit hours total.

All students must obtain credit in at least nine hours of lower division history credit before enrolling in upper division work.

Upper Division Requirements
Major students obtain credit in at least 32 credit hours (eight courses) of 300 and 400 division work; 12 credit hours (three courses) must be in 400 division courses. Courses must be distributed within all four groups. Students must take at least one course from
each group. Global/Comparative courses that are also included in another group may only be counted towards fulfilling the upper division course requirement for one group.

**Group 1 – Europe**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 307-4</td>
<td>Selected Topics in Hellenic Studies</td>
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<tr>
<td>HIST 308-4</td>
<td>The Byzantine Empire</td>
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<tr>
<td>HIST 310-4</td>
<td>Women and the Family in Modern Europe</td>
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<td>HIST 315-4</td>
<td>Politics and Society in England, 1500-1707</td>
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<td>HIST 316-4</td>
<td>English Society since the Mid 18th Century</td>
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<tr>
<td>HIST 319-4</td>
<td>The Modern French Nation</td>
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<tr>
<td>HIST 320-4</td>
<td>European Reformation</td>
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<tr>
<td>HIST 321-4</td>
<td>State and Society in Early Modern Europe</td>
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<tr>
<td>HIST 331-4</td>
<td>Germany from the Reformation to 1815</td>
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<tr>
<td>HIST 332-4</td>
<td>Politics and Culture in Modern Germany</td>
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<tr>
<td>HIST 334-4</td>
<td>The Making of Imperial Russia</td>
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<tr>
<td>HIST 335-4</td>
<td>The Soviet Project</td>
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<tr>
<td>HIST 336-4</td>
<td>Absolutism and Enlightenment</td>
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<tr>
<td>HIST 337-4</td>
<td>The Balance of Power in Europe</td>
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<tr>
<td>HIST 338-4</td>
<td>World War II</td>
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<tr>
<td>HIST 339-4</td>
<td>The British Empire and Commonwealth</td>
</tr>
<tr>
<td>HIST 345-4</td>
<td>Selected Topics in European History</td>
</tr>
<tr>
<td>HIST 360-4</td>
<td>The History of Science: 1100-1725</td>
</tr>
<tr>
<td>HIST 361-4</td>
<td>The History of Science: The 18th Century to the Present</td>
</tr>
<tr>
<td>HIST 362-4</td>
<td>Ireland from the Penal Era to Partition</td>
</tr>
<tr>
<td>HIST 401-4</td>
<td>Problems in Modern German History</td>
</tr>
<tr>
<td>HIST 402-4</td>
<td>Renaissance Italy</td>
</tr>
<tr>
<td>HIST 403-4</td>
<td>The European Reformation</td>
</tr>
<tr>
<td>HIST 404-4</td>
<td>Protests, Papists and Puritans: Culture and Belief in Early Modern England, 1500 – 1640</td>
</tr>
<tr>
<td>HIST 405-4</td>
<td>Authority and Community in Early Modern English Society, 1500 – 1700</td>
</tr>
<tr>
<td>HIST 407-4</td>
<td>Popular Culture in Great Britain and Europe</td>
</tr>
<tr>
<td>HIST 412-4</td>
<td>Class and Gender in Modern Europe</td>
</tr>
<tr>
<td>HIST 413-4</td>
<td>Marxism and the Writing of History</td>
</tr>
<tr>
<td>HIST 414-3</td>
<td>Britain and Europe in the Twentieth Century</td>
</tr>
<tr>
<td>HIST 414-4</td>
<td>The Impact of the Great War</td>
</tr>
<tr>
<td>HIST 415-4</td>
<td>Victorian Britain</td>
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<tr>
<td>HIST 416-4</td>
<td>The French Revolution</td>
</tr>
<tr>
<td>HIST 417-4</td>
<td>Modern French Problems in History</td>
</tr>
<tr>
<td>HIST 419-4</td>
<td>Problems in Modern Russian History</td>
</tr>
<tr>
<td>HIST 420-4</td>
<td>Russia as a Multinational Empire</td>
</tr>
<tr>
<td>HIST 421-4</td>
<td>Greek, 1830-1925: Occupation and Resistance</td>
</tr>
<tr>
<td>HIST 422-4</td>
<td>Greece, 1933-1944: Occupation and Resistance</td>
</tr>
<tr>
<td>HIST 439-4</td>
<td>Catholicism in Early Modern Europe</td>
</tr>
<tr>
<td>HIST 462-4</td>
<td>Religion, Ethnicity, and Politics in Twentieth-Century Northern Ireland</td>
</tr>
</tbody>
</table>

**Group 2 – The Americas**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 322-4</td>
<td>Atlantic and Pacific Migration</td>
</tr>
<tr>
<td>HIST 324-4</td>
<td>Slavery in the Americas</td>
</tr>
<tr>
<td>HIST 325-4</td>
<td>History of Aboriginal Peoples of North America to 1850</td>
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<tr>
<td>HIST 326-4</td>
<td>History of Aboriginal Peoples of North America since 1850</td>
</tr>
<tr>
<td>HIST 327-4</td>
<td>Canadian Labor and Working Class History</td>
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<tr>
<td>HIST 328-4</td>
<td>The Province of Quebec from Confederation</td>
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<tr>
<td>HIST 329-4</td>
<td>Canadian Family History</td>
</tr>
<tr>
<td>HIST 337-4</td>
<td>Conquest in North America, 1500-1900</td>
</tr>
<tr>
<td>HIST 374-4</td>
<td>Selected Topics in the History of the Americas</td>
</tr>
<tr>
<td>HIST 376-4</td>
<td>North American West</td>
</tr>
<tr>
<td>HIST 377-4</td>
<td>Environmental History</td>
</tr>
<tr>
<td>HIST 378-4</td>
<td>The United States in the World since 1865</td>
</tr>
<tr>
<td>HIST 382-4</td>
<td>African-American History, since 1865</td>
</tr>
<tr>
<td>HIST 384-4</td>
<td>North American Urban History</td>
</tr>
<tr>
<td>HIST 409-4</td>
<td>Disease and Society</td>
</tr>
</tbody>
</table>

**Group 3 – Africa, Middle East, Asia**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 343-4</td>
<td>Africa and the Slave Trade</td>
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<tr>
<td>HIST 344-4</td>
<td>Africa and the Slave Trade</td>
</tr>
<tr>
<td>HIST 348-4</td>
<td>A History of 20th Century South Africa</td>
</tr>
<tr>
<td>HIST 350-4</td>
<td>The Ottoman Empire and Turkey</td>
</tr>
<tr>
<td>HIST 352-4</td>
<td>Religion and Politics in Modern Iran</td>
</tr>
<tr>
<td>HIST 354-4</td>
<td>Imperialism and Modernity in the Middle East</td>
</tr>
<tr>
<td>HIST 355-4</td>
<td>The Arab Middle East in the Twentieth Century</td>
</tr>
<tr>
<td>HIST 366-4</td>
<td>Social History in China since 1800</td>
</tr>
<tr>
<td>HIST 368-4</td>
<td>Selected Topics in the History of the Wider World</td>
</tr>
<tr>
<td>HIST 371-4</td>
<td>The Asia Pacific War in Modern Japanese History</td>
</tr>
<tr>
<td>HIST 388-4</td>
<td>Christianity and Globalization</td>
</tr>
<tr>
<td>HIST 456-4</td>
<td>The Late Ottoman Empire: State, Culture and Social Transformation, 1750-1923</td>
</tr>
<tr>
<td>HIST 457-4</td>
<td>The Turkish Republic: Politics, Society and Culture, 1918-Present</td>
</tr>
<tr>
<td>HIST 465-4</td>
<td>The Palestinian-Israeli Conflict</td>
</tr>
<tr>
<td>HIST 466-4</td>
<td>Religion and Society in Africa, Nineteenth and Twentieth Century</td>
</tr>
<tr>
<td>HIST 467-4</td>
<td>Modern Egypt</td>
</tr>
<tr>
<td>HIST 468-4</td>
<td>Problems in the History of Religion</td>
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<tr>
<td>HIST 469-4</td>
<td>Islamic Social and Intellectual History</td>
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<tr>
<td>HIST 471-4</td>
<td>Women in Modern Japanese History</td>
</tr>
<tr>
<td>HIST 472-4</td>
<td>Problems in World History</td>
</tr>
<tr>
<td>HIST 473-4</td>
<td>The Making of South African Society</td>
</tr>
<tr>
<td>HIST 475-4</td>
<td>Change, Conflict and Resistance in Twentieth-Century China</td>
</tr>
</tbody>
</table>

**Group 4 – Global/Comparative**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>HIST 300-4</td>
<td>Approaches to History</td>
</tr>
<tr>
<td>HIST 322-4</td>
<td>Atlantic and Pacific Migration</td>
</tr>
<tr>
<td>HIST 334-4</td>
<td>The Making of Imperial Russia</td>
</tr>
<tr>
<td>HIST 335-4</td>
<td>The Society Project</td>
</tr>
<tr>
<td>HIST 373-4</td>
<td>North American Conquest</td>
</tr>
<tr>
<td>HIST 376-4</td>
<td>North American West</td>
</tr>
<tr>
<td>HIST 378-4</td>
<td>The United States in the World since 1865</td>
</tr>
<tr>
<td>HIST 388-4</td>
<td>Christianity and Globalization</td>
</tr>
<tr>
<td>HIST 412-4</td>
<td>Marxism and the Writing of History</td>
</tr>
<tr>
<td>HIST 420-4</td>
<td>Russia as a Multinational Empire</td>
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<tr>
<td>HIST 425-4</td>
<td>Gender and History</td>
</tr>
<tr>
<td>HIST 442-4</td>
<td>America’s Empires</td>
</tr>
<tr>
<td>HIST 446-4</td>
<td>American Revolution in International Context</td>
</tr>
<tr>
<td>HIST 454-4</td>
<td>The History of Sexuality</td>
</tr>
<tr>
<td>HIST 466-4</td>
<td>Religion and Society in Africa, Nineteenth and Twentieth Century</td>
</tr>
<tr>
<td>HIST 469-4</td>
<td>Islamic Social and Intellectual History</td>
</tr>
<tr>
<td>HIST 472-4</td>
<td>Problems in World History</td>
</tr>
</tbody>
</table>

These interdisciplinary courses below have some Canadian history content.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CNS 391-3</td>
<td>Special Canadian Topics</td>
</tr>
<tr>
<td>CNS 210-3</td>
<td>Foundations of Canadian Culture</td>
</tr>
<tr>
<td>HIST 316-4</td>
<td>Canadian History and Culture since the Mid 18th Century</td>
</tr>
</tbody>
</table>

**Honors Program**

In intensive, small seminars, students refine discussion skills, expository writing, and critical thought. No more than 30 students are enrolled. To pursue the honors program, apply to the program supervisor at the end of the fourth level. Admitted students must maintain a minimum 3.33 GPA in all honors courses, and a minimum of 3.0 in all other upper division courses. The three required honors courses must be completed in two or three terms in a fall/spring sequence and all other work must be completed within six terms of program admission. Honors students must complete the following.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 300-4</td>
<td>Approaches to History</td>
</tr>
<tr>
<td>HIST 305-4</td>
<td>Honors Seminar</td>
</tr>
<tr>
<td>HIST 400-4</td>
<td>Seminar in Historical Methods</td>
</tr>
<tr>
<td>HIST 498-6</td>
<td>Honors Essay</td>
</tr>
</tbody>
</table>
In addition to the 18 honors program credit hours, 42 upper division credit hours are also required. Students are encouraged to take courses outside the department but at least 50 of the 60 upper division credit hours must be in history courses. For honors requirements, see page 131.

**History Minor Program**
To enter the minor program, students must obtain at least nine credit hours in 100 and 200 division history. Minor students must obtain credit in 300 and 400 division work, totalling at least 15 or 16 credit hours with at least four credit hours in each division.

**Labor Studies Minor**
Students must complete 24 credit hours comprised of nine lower division credit hours including LBST 101-3 Introducing Labor Studies and 15 upper division credit hours including LBST 301-3 Labor Movements: Contemporary Issues and 15 or 16 credit hours in 300 and 400 division courses and 15 or 16 credit hours in 300 and 400 division, with at least four credit hours in each division.

**Languages Other Than English**
Although not required for a history BA, it is useful to be acquainted with a language other than English for many history courses. Students, especially those who intend to pursue graduate courses, should consider including a second language in their programs.

**History Extended Minor Program**
This program consists of the lower division requirements for a major and the upper division requirements for a minor. Other criteria may be set by individual departments and programs. A student must have their program approved by the faculty advisor of the extended minor program.

The program requires 18 credit hours in 100 and 200 division courses and 15 or 16 credit hours in 300 and 400 division, with at least four credit hours in each division.

**Joint Major in History and Canadian Studies**
See “Joint Major Programs” on page 136.

**Joint Major in French, History, and Politics**
This joint major offers study of the language, history, politics and culture of French speaking people of Canada and the world. It prepares for careers in civil service, politics (emphasizing Canadian government and politics or international relations), diplomatic service, international organizations, journalism, teaching and archival work. See page 159.

**Joint Major in History and Humanities**
See “Joint Major in History and Humanities” on page 167.

**Certificate in Labor Studies**
Students must complete a minimum of 24 credit hours including both of LBST 101-3 Introducing Labor Studies and LBST 301-3 Labor Movements: Contemporary Issues and 15 or 16 credit hours in 300 and 400 division courses and 15 or 16 credit hours in 300 and 400 division, with at least four credit hours in each division.

**Certificate in Labor Studies**
Students must complete a minimum of 24 credit hours including both of LBST 101-3 Introducing Labor Studies and LBST 301-3 Labor Movements: Contemporary Issues and 15 or 16 credit hours in 300 and 400 division courses and 15 or 16 credit hours in 300 and 400 division, with at least four credit hours in each division.

**Co-operative Education Program**
Co-operative Education combines work experience with academic studies. Students spend alternate terms on campus and in paid, study related jobs which provide practical experience in social sciences, interpretive skills and complements a history degree.

**Department of Humanities**
5115 Academic Quadrangle, 778.782.3689 Tel, 778.782.4504 Fax, www.sfu.ca/humanities

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S. Duguied BA (III), MA, PhD (S Fraser)

**Professors Emeriti**
A. Gomez-Moriana Lic, PhD (Salamanca), MA, PhD (Mun), FRSC
T.J. Kirschke BA (Roosevelt), MA, PhD (Chic)
J.W. Walls BA, MA, PhD (Indiana)
J. Zaslove BA (Case W Reserve), PhD (Wash)

**Professors**
I. Angus BA, MA (Wat), PhD (York, Can)
S. Duguied BA (III), MA, PhD (S Fraser)
P.E. Dutton BA (WOrt), MA, PhD (Tor), MSL, MSD (Pontif Inst Tor), FRSc, Jack and Nancy Farley Endowed University Professor in History
K. Mezeli BA (York, Can), MA (Car), PhD (Qu)

**Associate Professors**
A.M. Feenber-Dibon Licence d'Anglais, Diplome d'Etudes Superieures (Sorbonne), PhD (Cail)
T. Kawasaki LLB (Doshisha), MA, PhD (Prin)**
D.C. Minhyd BA, MA (Br Col), PhD (Rutgers)
E. Stebner BA, MA (Cali), PhD (Duke), J.S. Woodsworth Chair

**Assistant Professors**
P. Crowe BA (Cali), MA, PhD (Br Col)
S. Gandesha BA (Br Col), MA, PhD (York)
E. O'Brien BA (Tor), MA, PhD (Brown)*

**Adjunct Professors**
P. Kingsley MLIt (Cambi), PhD (Lond)

**Associate Member**
Y. Wosk, Continuing Studies

**Lecturer**
C. Jones BA (Br Col), MA, PhD (McG)

*joint appointment with history
**joint appointment with political science

* when topic is appropriate
** joint appointment with political science
Advisor
Ms. C. Prisland, 5114 Academic Quadrangle, 778.782.4094, prisland@sfu.ca

Humanities studies a broad range of ideas and subjects drawn from philosophy, art, literature, history, religion, science, and social and political thought. Through a comparative and interdisciplinary approach to classical, medieval, renaissance, and modern culture, the study of humanities raises critical questions about achievements and controversies associated with civilization itself. Students are encouraged to examine knowledge and ideas central to the humanities and to integrate these concerns with degree programs in original and critical ways. The Asia-Canada Program and the graduate Liberal Studies Program are affiliated with the Department of Humanities. See “Asia-Canada Program” on page 134 and also see “Liberal Studies Program” on page 294 for more information.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program
Lower Division Requirements
Eighteen lower division credit hours including HUM 101-3 Introduction to the Humanities plus one of HIST 106-3 Western Civilization from the Reformation Era to the 20th Century or HUM 105-3 Western Civilization from the Ancient World to the Reformation Era plus one of PHIL 150-3 History of Philosophy I or PHIL 151-3 History of Philosophy II plus one of HUM 201-3 Great Texts in the Humanities I or HUM 202-3 Great Texts in the Humanities II or HUM 203-3 Great Texts in the Humanities III plus two further lower division humanities courses.

Upper Division Requirements
Thirty credit hours in upper division humanities* courses which must include HUM 495-2 Humanities Graduating Seminar
Students are expected to include a breadth of humanities courses in fulfilling the upper division requirement. Therefore, they must consult the student advisor to plan their upper division course selection.

*In support of the humanities interdisciplinary approach, with humanities advisor prior approval, students may substitute one humanities-related upper division course from another academic unit towards the upper division humanities requirement. The same course may not be used toward more than one program (honors, joint honors, major, joint major, minor or extended minor). See the first paragraph for a definition of humanities related subjects.

Minor Program
Lower Division Requirements
Nine lower division credit hours including HUM 101-3 Introduction to the Humanities one of HUM 201-3 Great Texts in the Humanities I HUM 202-3 Great Texts in the Humanities II HUM 203-3 Great Texts in the Humanities III and one further humanities course.

Upper Division Requirements
Students must complete 16 credit hours in upper division humanities courses comprising four courses, or three courses plus HUM 400. Students wishing to complete an individual research project should include HUM 400 in their program.

Extended Minor Program
Students may qualify for a BA with an extended minor in humanities plus one other extended minor, or may use the extended minor in combination with other programs in other degrees.

Lower Division Requirements
Students must complete the lower division requirements for the major in humanities.

Upper Division Requirements
Students must complete 16 upper division credit hours in humanities courses.

Joint Major in English and Humanities
This joint major is for those interested in exploring relationships between English literature and humanities. Students must plan their program in consultation with advisors in each department.

Lower Division Requirements
English Students must complete the lower division requirements of the English major program. Please see “Lower Division Requirements” on page 153.

Humanities Students must complete 15 credit hours including HUM 101-3 Introduction to the Humanities and two of HUM 201-3 Great Texts in the Humanities I or HUM 202-3 Great Texts in the Humanities II or HUM 203-3 Great Texts in the Humanities III and two further humanities courses.

Upper Division Requirements
English Students must complete 20 upper division English credit hours. One course must come from within the grouping of ENGL 300, 304, 306, 310, 311, 313, 320, and 322; and one from within the grouping of ENGL 354, 357, and 359. Four credit hours must be at the 400 division, excluding Directed Studies courses (ENGL 441, 442, 443 and 444).

Humanities Students must complete 22 credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar Recommended
HUM 305-4 Medieval Studies
HUM 307-4 Carolingian Civilization
HUM 311-4 Italian Renaissance Humanism
HUM 312-4 Renaissance Studies
HUM 321-4 The Humanities and Critical Thinking

Joint Major in French and Humanities
This inter-departmental program explores the relationship between the study of humanities and French. Interested students must plan their program in consultation with advisors in each department.

Lower Division Requirements
French Students must complete the lower division requirements of the French major program. Please see “Lower Division Requirements” on page 158.

Humanities Students must complete 15 credit hours including HUM 101-3 introduction to the Humanities and two of HUM 201-3 Great Texts in the Humanities I or HUM 202-3 Great Texts in the Humanities II or HUM 203-3 Great Texts in the Humanities III and two further humanities courses.

Upper Division Requirements
French FREN 301-3 Advanced French Composition and one of FREN 360-4 Intermediate French Literature or FREN 370-4 Introduction to French Linguistics II plus 15 credit hours from the 400 division French linguistics or literature offerings. FREN 461 and 462 are recommended.

Humanities Twenty-two credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar Recommended
HUM 307-4 Carolingian Civilization
HUM 311-4 Italian Renaissance Humanism

Joint Major in History and Humanities
This joint major is for those interested in exploring relationships between the two disciplines. Students must plan their program in consultation with advisors in each department.

Lower Division Requirements
History Students must complete the lower division requirements of the history major program. Please see “Lower Division Requirements” on page 167.

Humanities Fifteen credit hours including HUM 101-3 introduction to the Humanities and two of HUM 201-3 Great Texts in the Humanities I or HUM 202-3 Great Texts in the Humanities II or HUM 203-3 Great Texts in the Humanities III and two further humanities courses.

Upper Division Requirements
History Twenty-four credit hours of 300 and 400 division history courses, of which 12 hours must be in 400 division courses. Students must take at least two courses from any two groups, and at least one from the remaining group. For a description of the three groups, see “Major Program” on page 164.

Humanities Twenty-two credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar Recommended
HUM 302-4 The Golden Age of Greece: An Integrated Society
HUM 303-4 The Latin Humanist Tradition
HUM 305-4 Medieval Studies
HUM 307-4 Carolingian Civilization
HUM 311-4 Italian Renaissance Humanism
HUM 312-4 Renaissance Studies
Joint Major in Philosophy and Humanities

This joint major explores the relationships between the two disciplines. Students must plan their program in consultation with advisors in each department.

Lower Division Requirements

Humanities
Fifteen credit hours including HUM 101-3 introduction to the Humanities and two of HUM 201-3 Great Texts in the Humanities I, HUM 202-3 Great Texts in the Humanities II, HUM 203-3 Great Texts in the Humanities III and two further humanities courses.

Philosophy
Twelve credit hours including all of PHIL 100-3 Knowledge and Reality, PHIL 120-3 Introduction to Moral Philosophy, PHIL 203-3 Metaphysics and one of PHIL 150-3 History of Philosophy I, PHIL 151-3 History of Philosophy II.

Upper Division Requirements

Humanities
Twenty-two credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar

Recommended
HUM 320-4 The Humanities and Philosophy, HUM 521-4 The Humanities and Critical Thinking

Philosophy
Twenty-one credit hours are required.

Joint Major in Women’s Studies and Humanities

For requirements, see “Joint Major in Humanities and Women’s Studies” on page 189.

Post Baccalaureate Diploma in Humanities

This is for those who have completed a bachelor’s degree. For information about the program’s general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Program Requirements

Students must successfully complete an approved program comprising 30 upper division or graduate credit hours including at least 16 HUM credit hours. Students should include HUM 400. The remaining 14 are selected in consultation with an advisor in the subject or discipline which most closely fits the student’s goals. Contact the humanities advisor.

Co-operative Education

Co-op education courses are for students who meet Faculty of Arts and Social Sciences Co-operative Education Program requirements and who wish practical experience related to Humanities studies. The program entails planned study terms and employment. See the course descriptions for HUM 471, 472, 473, 474 (page 410). Work-term arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator who should be consulted at least one term in advance. See “Co-operative Education” on page 237.

School for International Studies

2403 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V5B 5K3, 778.782.7148 Tel, 778.782.7837 Fax 6225 Academic Quadrangle (Burnaby campus), 778.782.7345 Tel, 778.782.7837 Fax www.sfu.ca/internationalstudies, inst@sfu.ca

Director
J. Harriss BA, MA (Camb), PhD (E Anglia)

Professors
L. Cohen BA, MA (Ill), PhD (Col) S. Easton AB (Oberlin), AM, PhD (Chic) M. Howard AB (S Caloif), MA (Nifo), PhD (WAust) P.V. Warwick BA (McM), MA, PhD (Chic)*

Associate Professor
D. Gross Licence en Sciences, Economiques, Ecles des Hautes Etudes Commerciales (Lausanne), MA (Car), PhD (Tori)***

Assistant Professor
L. Nettelfield BA (Calif), MA, MPhil, PhD (Col)

Adjunct Professors
J. Simons BA (Antioch), MA, PhD (SFraser) B.T. Win BA, MA (Rangoon), PhD (Seoul), PhD (Washington)
D. T. Yee BA, BEd, MEd (Rangoon), PhD (Washington)

"Joint appointment with political science ***Joint appointment with public policy program Advisor
Ms. J. Berube BA (S Fraser), 778.782.7148 Tel, 778.782.7837 Fax, jberubea@sfu.ca

The program is designed primarily for students with a background or interest political science, history, economics, geography, sociology, anthropology, and humanities, as well as other areas. Students can specialize in international issues through a curriculum which integrates training and experience concerning the complex and challenging issues that are central to global affairs. Public or private sector employees who wish to specialize in specific dimensions that are necessary to understand and address international issues may also be interested in this program.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Program Requirements

Students may adopt international studies as a major, minor, or honors as part of their course work at Simon Fraser University. Students may apply for admission to the International Studies program after completing the lower division requirements, with a CGPA of 2.3. The International Studies program will consist of three primary components: prerequisite courses required for the thematic streams, the thematic streams themselves, and a foreign cultural component.

Major Program

Lower Division Requirements
Students must complete 24 lower division credit hours including ECON 102-3 The World Economy

IS 101-3 Introduction to International Studies: Studying Global Conflict and Co-operation IS 240-3 Research Methods in International Studies plus 15 lower division credit hours as determined by stream 1, 2, or 3 below.

Upper Division Requirements

Students must complete 32 upper division IS credit hours including both of IS 450-4 Seminar on Global Problems in Interdisciplinary Perspective IS 451-4 Seminar on Core Texts in International Studies

The remaining 24 credit hours must be from one of the three streams (see “International Studies Streams” on page 168); Students must also fulfill the foreign cultural component (see “Foreign Cultural Component” on page 169).

Honors Program

This program is for those who wish to refine their discussion skills, and their expository writing and critical thought with an international context. For program entry, apply to the program director after completion of all of the lower division credit hours. Those admitted must maintain a minimum 3.0 cumulative grade point average.

For an honors degree, students complete 24 lower division credit hours including required lower division courses for a major 50 upper division credit hours including all requirements for the major plus both of IS 490-4 Honors Seminar IS 490-5 Honors Essay

The additional upper division credit hours can be from any of the streams or foreign cultural component.

Minor Program

Lower Division Requirements

Students must complete 12 credit hours including ECON 102-3 The World Economy IS 101-3 Introduction to International Studies: Studying Global Conflict and Co-operation plus two of IS 200-3 Historical Perspectives on Diplomatic Relations, International Security and Law (required for students completing stream 1) IS 210-3 Comparative World Politics: Trajectories, Regimes, Challenges (required for students completing stream 2) IS 220-3 Introduction to International Economics (required for students completing stream 3) IS 230-3 Transnationalism and Society

Upper Division Requirements

Students complete 16 upper division credit hours from one of the three streams (see International Studies Streams below).

International Studies Streams

Students must complete both upper and lower division requirements in each stream to fulfill the stream requirement. No more than two of the required upper division courses can be fulfilled with courses from any one department, except International Studies. As well, the program advisor may approve selected international field school or exchange courses (see below) for credit towards a stream when the topic is appropriate.

It is the student’s responsibility to ensure that all prerequisites are met for upper division requirements.
Stream 1 International Security and Conflict
Lower Division
IS 200-3 Historical Perspectives on Diplomatic Relations, International Security and Law
plus two of
IS 210-3 Comparative World Politics: Trajectories, Regimes, Challenges
IS 220-3 Introduction to International Economics
IS 230-3 Transnationalism and Society
plus two of
additional IS 210, 220 or 230 (whichever course is not taken to fulfill above requirement)
GEOG 102-3 World Problems in Geographic Perspective
HIST 130-3 Modern World History
POL 241-3 Introduction to International Politics
SA 203-4 Violence in War and Peace

Upper Division
Students must complete 24 credit hours from
IS 302-4 Introduction to Humanitarian Intervention
IS 303-4 Ethnic Minorities, Identity Politics and Conflict in SE Asia
IS 400-4 State Building and State Failure: Comparative Perspectives
IS 402-4 The Great Game: International Politics in Asia in Historical Perspective
IS 403-4 Gender, Conflict and Nationalism
IS 406-4 Selected Topics – Complex Emergencies
IS 407-4 Selected Topics – Terrorism
IS 408-4 Directed Readings I
IS 409-4 Special Topics I
IS 452-4 Special Topics: Field School I
CRIM 413-3 Terrorism
HIST 465-4 The Palestinian-Israeli Conflict
POL 342-4 Relations Between Developed and Developing Nations
POL 344-4 Public International Law
POL 346-4 International Organizations
POL 348-4 Theories of War, Peace, and Conflict Resolution
POL 417-4 Human Rights Theories
POL 443-4 Nuclear Strategy, Arms Control and International Security
POL 446-4 International Relations in East Asia
POL 448-4 Selected Topics in International Relations
POL 449-4 Selected Topics in International Relations

Students completing a major or honors must also complete
IS 450-4 Seminar on Global Problems in Interdisciplinary Perspective
IS 451-4 Seminar on Core Texts in International Studies

Stream 2 Comparative World Politics, Culture and Society
Lower Division
Students must complete
IS 210-3 Comparative World Politics: Trajectories, Regimes, Challenges
plus one of
IS 230-3 Transnationalism and Society
POL 231-3 Introduction to Comparative Government and Politics
plus one of
IS 200-3 Historical Perspectives on Diplomatic Relations, International Security and Law
IS 220-3 Introduction to International Economics
IS 230-3 Transnationalism and Society (if not taken to fulfill above requirement)

plus two of
additional IS 200, 220 or 230 (whichever course is not taken to fulfill above requirements)
IS 231-3 Introduction to South Asia
IS 232-3 Introduction to Southeast Asia
HIST 130-3 Modern World History
HIST 146-3 Africa in Recent History
HIST 151-3 The Modern Middle East
HIST 206-3 Modern Japan
HIST 209-3 Latin America: the National Period
HIST 231-3 History of Africa to the 19th Century: From Ancient Times to the Slave Trade
HIST 255-3 China Since 1800
HIST 256-3 The People's Republic of China
POL 241-3 Introduction to International Politics
SA 203-4 Violence in War and Peace
SA 275-4 Asian Societies
WS 200-3 Women in Cross-Cultural Perspective

Upper Division
Students must complete 24 credit hours from
GEOG 420-4 Cultural Geography
GEOG 446-4 Migration and Globalization
HIST 335-4 The Soviet Project
HIST 348-4 A History of Twentieth Century South Africa
HIST 352-4 Religion and Politics in Modern Iran
HIST 354-4 Imperialism and Modernity in the Middle East
HIST 355-4 The Arab Middle East in the Twentieth Century
HIST 368W-4 Selected Topics in the History of the Wider World
HIST 388-4 Christianly and Globalization
HIST 420-4 Russia as a Multiethnic Empire
HIST 421-4 Modern Greece, 1864-1925
HIST 457-4 The Turkish Republic: Politics, Society, and Culture, 1918-present
HIST 465-4 The Palestinian-Israeli Conflict
HIST 467-4 Modern Egypt
HIST 472-4 Problems in World History
HIST 473-4 The Making of South African Society
HIST 479-4 Change, Conflict and Resistance in C20 China
IS 311-4 Democratic Transition in Comparative Perspective
IS 312-4 Europe: Undivided but Plural
IS 313-4 Nationalism, Democracy and Development in Modern India
IS 314-4 National, Regional, and International Politics in Southeast Asia
IS 410-4 Politics, Institutions and Development
IS 418-4 Directed Readings II
IS 419-4 Selected Topics II
IS 452-4 Special Topics: Field School I
POL 333-4 Soviet and Post-Soviet Political Systems
POL 334-4 East European Political Systems
POL 335-4 Government and Politics: People's Republic of China I
POL 336-4 Government and Politics: People's Republic of China II
POL 337-4 Government and Politics: Selected Latin American Nations I
POL 339-4 Selected Topics in Comparative Government and Politics
POL 381-4 Politics and Government of Japan I
POL 431-4 Comparative Western European Systems
POL 432-4 Comparative Communist and Post-Communist Political Systems
POL 438-4 Elections, Parties, and Governments in Comparative Perspectives
POL 438-4 Selected Topics in Comparative Government and Politics I
POL 439-4 Selected Topics in Comparative Government and Politics II
POL 448-4 Selected Topics in International Relations
POL 449-4 Selected Topics in International Relations II
POL 481-4 Ethnic Politics and National Identity
POL 483/SA 483-4 Political Economy of Latin American Development
SA 321-4 Social Movements
SA 361-4 Gender, Colonialism, Post-Colonialism
SA 388-4 Comparative Studies of Minority Indigenous Peoples
SA 392-4 Latin America
SA 396-4 Selected Regional Areas
SA 403-4 Selected Topics in Latin American Economy and Society (LAS)
SA 404-4 Selected Topics in Latin American Economy and Society (LAS)

Students completing a major or honors must also complete
IS 450-4 Seminar on Global Problems in Interdisciplinary Perspective

IS 451-4 Seminar on Core Texts in International Studies

Stream 3 International Development, Economic, and Environmental Issues
Lower Division
Students must complete
IS 220-3 Introduction to International Economics
plus two of
IS 200-3 Historical Perspectives on Diplomatic Relations, International Security and Law
IS 230-3 Comparative World Politics: Trajectories, Regimes, and Challenges
IS 230-3 Transnationalism and Society

plus both of
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics

Upper Division
ECON 342-3 International Trade
ECON 345-3 International Finance
ECON 355W-4 Economic Development
ECON 443-3 Seminar in International Trade
ECON 446-3 Seminar in International Finance
ECON 455W-3 Seminar in Economic Development
GEOG 312-4 Geography of Natural Hazards
GEOG 322-4 World Resources
GEOG 382-4 Population Geography
GEOG 386W-4 Human Ecology – Human Relations to Nature
GEOG 428-4 World Forests
GEOG 446-4 Migration and Globalization
GEOG 488-4 Society and Environment in China
IS 320-4 Selected Problems in the International Economy
IS 421-4 The Economics of International Organisations and Development
IS 427-4 Selected Topics – Globalization, Poverty and Inequality
IS 428-4 Directed Readings II
IS 429-4 Special Topics III
IS 452-4 Special Topics: Field School I

Students completing a major or honors must also complete
IS 450-4 Seminar on Global Problems in Interdisciplinary Perspective
IS 451-4 Seminar on Core Texts in International Studies

Foreign Cultural Component

Language Proficiency
An acquaintance with a language other than English is required. Those without this requirement should take language courses either at the Language Training Institute (page 174) or the Department of French (page 157). Demonstrated proficiency in a second language will consist of one of the following:
• the equivalent of four terms of a Simon Fraser University language program (either through completion of courses, course challenge, or placement tests)
• completion of high school in a language other than English. The School for International Studies will
### Language Courses

See CHIN, FREN, GER, GRK, ITAL, JAPN, SPAN in the Course Index section of this Calendar.

### Study Abroad Programs

This program requires some study abroad as part of the undergraduate education, preferably in the third or fourth year. Study can be counted toward the elective requirements with the approval of the program, for example, through:
- field schools (see “Study Abroad” on page 470)
- short-term foreign opportunities. Opportunities for international conferences, colloquia and research are available through the International Studies program.
- co-op education internship. Students can work in a foreign country, either for an overseas organization or for a Canadian affiliate. Other work experience includes employment through organizations such as the Department of Foreign Affairs under its internships programs including Global Issues, International Trade, and Value and Culture. Students in good standing with a minimum 3.0 GPA may apply to co-operative education after satisfactory completing 45 credit hours. The program consists of two separate work terms in a foreign relations field. Arrangements are made through the Faculty of Arts and Social Sciences co-op advisor.

### International Field School and Exchange Courses

The following courses are available for credit in approved Simon Fraser University field schools or as transfer credit for courses taken abroad in an exchange program. When the topics are appropriate, these courses may be applied to international studies module requirements. See the program advisor for course approval procedures.

- IS 452-4 Special Topics: Field School I
- LAS 402-5 Field Study
- LAS 403-4 Special Topics: Field School I
- LAS 405-3 Special Topics: Field School II

### Centre for Latin American Development Studies

5054 Academic Quadrangle, 778.782.3146 Tel, 778.782.5799 Fax, www.sfu.ca/las

**Director**

E. Hershberg BA (Indiana), MA, PhD (Wis)

**Professor Emeritus**

J. Garcia Prof Lit (Peru), MA (Alta), DoctCert (Madr)

**Associate Members**

- Y. Atasoy, Sociology
- R.E. Boyer, History*
- J. Brohman, Geography
- A. Clapp, Geography
- A. Dawson, History
- F. DeMaio, Sociology
- M. Gates, Anthropology
- A. Hira, Political Science
- R.W. Jamieson, Archaeology
- G. Otero, Sociology
- H. Wittman, Sociology
- H. Zaman, Women's Studies
   - emeritus

**Advisor**

Ms. K. Payne, 5055 Academic Quadrangle, 778.782.3726

Housed in the Department of Sociology and Anthropology, this centre offers a minor, extended minor, and nine joint majors in Latin American development studies in association with nine disciplinary programs. The multidisciplinary perspective in each of these joint majors focuses on historical and contemporary issues of development, with a solid grounding in one of the joint disciplines. It provides a sound background teaching, journalism, travel, community relations, law, diplomacy, government, international trade, and international development projects, and for advanced scholarly work. Integral to the program is the multidisciplinary field school in Latin America, and exchange programs with top Latin American universities.

Students must consult regularly with the advisor regarding course selection.

### Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty's requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

### Minor Program

Latin American development studies offers students the maximum opportunity to integrate understanding of Latin America and its relationship with Canada, the Pacific Rim, and the world.

**Language Requirements**

The following courses or equivalents are required.

- SPAN 102-3 Introductory Spanish I
- SPAN 103-3 Introductory Spanish II

Although all courses are taught in English, students must demonstrate a reading knowledge of Spanish (the equivalent of two college level courses) or Portuguese or, in exceptional circumstances, French. This is a recommended skill for upper division courses that frequency require independent investigation of specialized topics.

**Lower Division Requirements**

Students must complete 12 credit hours including:

- LAS 200-3 Introduction to Latin American Development Studies
- and two of
- ARCH 273-3 Archaeology of the New World
- HIST 208-3 Latin America: The Colonial Period
- HIST 209-3 Latin America: The National Period

and one of

- BUS 130-3 Business in the Networked Economy I
- CMNS 110-3 Introduction to Communication Studies
- CMNS 130-3 Explorations in Mass Communication
- ECON 102-3 The World Economy
- ECON 110-3 Foundations of Economic Ideas
- GEOG 100-3 Human Geography
- GEOG 111-3 Physical Geography
- POL 100-4 Introduction to Politics and Government
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology
- SA 150-4 Introduction to Sociology

**Upper Division Requirements**

Students must complete 15 upper division credit hours of courses with Latin American focus.

### Extended Minor Program

This program consists of the lower division requirements for a joint major, including language requirements, and the upper division requirements for a minor. Students' programs must be approved by the advisor of the program.

### Joint Major Programs

Joint major programs are available with the Departments of Archaeology, Economics, Geography, History, Political Science, Sociology and Anthropology, the School of Communication and the Faculty of Business Administration. The interdisciplinary joint major combines selected disciplines leading to a BA or a BBA.

Courses used toward the upper division Latin American development studies requirements may not be used as part of the other discipline’s credit requirements, or vice versa. Any lower division course that counts toward the separate requirements for Latin American development studies and the other subject may be counted towards both. Joint major students are required to complete all the courses listed for the discipline in which they are pursuing the other major. During the last year of their Latin American development studies joint major program, students must take LAS 498 in which they will complete their capstone project. This project will be written according to the standards of their disciplinary joint major, and will generally be of approximately 6,000-8,000 words.

Students are required to satisfy the prerequisites of all courses (upper and lower division) that are taken within this joint major and should consult regularly with the program advisor regarding course selection.

### Language Requirements

The following courses or equivalents are required.

- SPAN 102-3 Introductory Spanish I
- SPAN 103-3 Introductory Spanish II
- SPAN 201-3 Intermediate Spanish I
- SPAN 202-3 Intermediate Spanish II

### Latin American Development Studies Requirements

#### Lower Division Requirements

A minimum of 12 credit hours is required including:

- LAS 200-3 Introduction to Latin American Development Studies
- and two of
- ARCH 273-3 Archaeology of the New World
- HIST 208-3 Latin America: The Colonial Period
- HIST 209-3 Latin America: The National Period
- and one of
- BUS 130-3 Business in the Networked Economy I
- CMNS 110-3 Introduction to Communication Studies
- CMNS 130-3 Explorations in Mass Communication
- ECON 102-3 The World Economy
- ECON 110-3 Foundations of Economic Ideas
- GEOG 100-3 Human Geography
- GEOG 111-3 Physical Geography
- POL 100-4 Introduction to Politics and Government
- REM 100-3 Global Change
- SA 101-4 Introduction to Anthropology
- SA 150-4 Introduction to Sociology

#### Upper Division Requirements

A minimum of 40 upper division credit hours is required, with at least 20 in upper division credit hours with primary or substantial Latin American development studies focus, including LAS 498, and 20-32 upper division credit hours in the joint discipline selected, as specified below.

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**UNDERGRADUATE**

*Simon Fraser University 2007 • 2008 Calendar*
Other Discipline Requirements
To satisfy the requirements of the other joint major discipline, students must complete 20-32 credit hours, as indicated below for the specific discipline.

Anthropology
Students must complete 20 credit hours in upper division anthropology courses and must fulfill the anthropology major program's theory and methods requirements. See "Joint Major in Sociology or Anthropology and Latin American Development Studies" on page 183.

Archaeology
Students must complete 20 credit hours in archaeology in the 300 and 400 division.

Business Administration
See "Joint Major in Business Administration and Latin American Development Studies" on page 196.

Communication
Students must complete 26 communication upper division credit hours, including CMNS 347, 362, and 446 and also the faculty requirements of applied sciences or arts, depending on the desired degree: bachelor of arts (Faculty of Applied Sciences) or bachelor of arts (Faculty of Arts and Social Sciences).

Economics
Students must complete 25 upper division credit hours including ECON 301, 305, and BUEC 333 and at least one 400 division ECON or BUEC course (excluding ECON 431, 435, BUEC 433 and 485).

Geography
Students must complete 20 geography credit hours including a minimum of eight 400 division credit hours, at least one of which should include Latin American content.

History
Students must complete 24 credit hours of 300 and 400 division history courses, of which 12 hours must be in 400 division courses. Students must take at least two courses from any two groups, and at least one from the remaining group. For a description of the three groups, see "Major Program" on page 164.

Political Science
Students must complete 32 credit hours in upper division political science, as required for political science majors. (POL 337 may not be used to satisfy LAS requirements.)

Sociology
Students must complete 20 credit hours in upper division sociology courses and must fulfill the sociology major program's theory and methods requirements. See "Joint Major in Sociology or Anthropology and Latin American Development Studies" on page 183

Courses with Primary Latin American Focus*
Students may take any of the following courses to fulfill LAS requirements.

Others may be offered in addition to the those below. Consult the Centre for Latin American Development Studies advisor for a complete list each term.

ARCH 273-3 Archaeology of the New World
ARCH 330-3 Prehistory of Latin America
GEOG 466-4 Latin American Regional Development
HIST 208-3 Latin America: The Colonial Period
HIST 209-3 Latin America: The National Period
HIST 458-4 Problems in Latin American Regional History
HIST 459-4 Problems in the Political and Social History of Latin America
LAS 200-3 Introduction to Latin American Development Studies
LAS 402-5 Field Study

LAS 404-3 Special Topics: Field School I
LAS 405-3 Special Topics: Field School II
LAS 493-3 Directed Readings
LAS 498-5 Capstone Project
POL 320-4 Canada-Latin America
POL 337-4 Government and Politics: Selected Latin American Nations I
POL 440-4 Latin American International Relations
POL 450-4 Globalization and Regional Politics in Latin America
POL 483-4 Political Economy of Latin American Development
SA 392-4 Latin America
SA 403-4 Special Topics: Latin American Economy and Society
SA 404-4 Andean Society and Culture
SA 483-4 Political Economy of Latin American Development
WS 323-4 Women in Latin American Literature and Society.

*students may use other courses with primary Latin American content to fulfill Latin American development studies course requirements with approval of the program advisor

Courses with Substantial Latin American Focus
Courses in which Latin America is substantially emphasized may fulfill LAS joint major requirements when the content is substantially focussed on the Latin American regions. Students should review course outlines in the general office and consult with the Latin American Development Studies program advisor for permission to take these courses.

Students wishing to take a special topics course for Latin American development studies credit should have the course approved by the instructor and the program advisor.

CMNS 347-4 Communication in Conflict and Intervention
CMNS 444-4 Political Economy of International Communication
CMNS 446-4 The Communication of Science and Transfer of Technology
ECON 355-4 Economic Development
ECON 362-4 Economics of Natural Resources
gEOG 322-3 World Resources
GEOG 422-4 Theories and Practices of Development
GEOG 428-4 World Forests
HIST 104-3 History of the Americas to 1763
HIST 299-3 Problems in History
HIST 324-4 Slavery in the Americas
POL 342-4 Relations Between Developed and Developing Nations
POL 345-4 The Nation-State and the Multinational Corporation
POL 433-4 Comparative Developing Systems
SA 388-4 Comparative Studies of Minority Indigenous Peoples
SA 429-4 Sex, Work and International Capital
WS 200-3 Women in Cross-Cultural Perspective
WS 309-4 Gender and Development

Field School
The field school provides a full term in Latin America. Students gain, through direct experience, a deeper insight into the cultural, political, and economic issues of Latin American development. One faculty member and up to 20 students travel every second year to a selected location.

Co-operative Education
This program is for qualified students who wish practical experience in the field of Latin American development studies. For admission, students must have completed 30 credit hours with a minimum 2.75 CGPA. Prior to admission, students should complete LAS 200, two other lower division course requirements and SPAN 102. Transfer students must complete at least 15 credit hours at Simon Fraser University.

See "Co-operative Education" on page 237 for details. Arrangements for work terms are made through the Faculty of Arts and Social Sciences co-op coordinator who should be consulted at least one term in advance.

Department of Linguistics
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Chair
Z. McRobbie UDIpl, Dipl, PhD (Eötvös Loránd, Budapest), PhD (Manit)

Professors Emeriti
J.A. Foley BA (Nebraska), PhD (MIT)
E.W. Roberts BA (Wales), MA, PhD (Camb)

Professors
D.B. Gerds BA (Missouri), MA (Br Coll), PhD (Calif)
M. Munro BEd, MSc, PhD (Alta)
F.J. Pelletier BS, MA (Nebraska), MSc, MSc (Alta),
PhD (Calif), Canada Research Chair*

Associate Professors
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P. McFetridge BA, MA, PhD (S Fraser)
Z. McRobbie UDIpl, Dipl, PhD (Eötvös Loránd, Budapest), PhD (Manit)
T.A. Perry BA (Wabash), MA, PhD (Indiana),
Associate Dean of Arts and Social Sciences,
J.M. Sosa ProfLit&Ling (Venezuela Central),
MA, (Lond), PhD (Mass)
T. Heft I and II Staatsexamen (Weingarten), MA,
PhD (S Fraser)

Assistant Professors
J. Alderete BA, MA (Calif), PhD (Mass)
C.-H. Han BA (Ewha Woman's University, Korea), MA,
PhD (Penn)
J.D. Mellon BA (Calg), MA (McG), PhD (Br Coll)
P. Pappas BA (St John's, Maryland), PhD (Ohio State)
M. Taboada BA, MA (Complutense, Madrid), MSc
(Carnegie-Mellon), PhD (Complutense, Madrid)
Y. Wang BA, MA (NTNU), MA, PhD (Cornell)

Senior Lecturers
M. Escudero BA, MA (S Fraser), Phd (Br Coll)
S. Fleming BA (Br Coll), MA (S Fraser)
B. Ng BA (Intl Christian, Japan), MA (Lond)
N. Omae MA (Osaka), MPhil (Exe)
L. Zuccolo BA (Arg), MA (S Fraser)

Lecturers
C. Burgess BA, MA, PhD (S Fraser), LLB (Br Coll)
I. Galloway BA, MA (Manc), MA (C'dia)
S. Russell BA (Br Coll), MA (S Fraser)

Associated Faculty
M. Boelshcer Ignace, First Nations Studies, Sociology and Anthropology
F. Popowich, Computing Science
W. Turnbull, Psychology
J.W. Walls, Humanities

“joint appointment with cognitive science, philosophy”

“joint appointment with philosophy”

Advisors
Ms. R. Parmar BA (S Fraser), 9200 Robert C. Brown Hall, 778.782.5739

Simon Fraser University  2007 • 2008 Calendar
Honors Program
An overall cumulative GPA of 3.0 and a minimum C grade in LING 220 is required for admission.

Lower Division Requirements
LING 130-3 Practical Phonetics
LING 220-3 Introduction to Linguistics
LING 221-3 Introduction to Phonology
LING 222-3 Introduction to Syntax
plus three additional credit hours in 200 division linguistics courses

Upper Division Requirements
LING 301-3 Linguistic Argumentation
LING 321-3 Phonology
LING 322-3 Syntax
LING 490-3 Honors Essay
plus any two of
LING 323-3 Morphology
LING 324-3 Semantics
LING 330-3 Phonetics
plus 33 additional hours chosen from upper division linguistics courses.

Minor Program
A minimum C grade in LING 220 is required for admission.

Lower Division Requirements
LING 130-3 Practical Phonetics
LING 220-3 Introduction to Linguistics
plus nine additional credit hours in 200 division linguistics courses

Upper Division Requirements
Students must complete 15 hours of upper division LING courses.

Note: General course descriptions are given in the Undergraduate Courses section (page 171).

Extended Minor Program
An extended minor consists of the lower division requirements for a major and the upper division requirements for a minor. Certain other criteria may be set by individual departments and programs. A student must have their program approved by the advisor for the extended minor program.

Joint Major in Computing Science and Linguistics

Joint Major in Linguistics and Anthropology
An overall cumulative GPA of 2.25 and a minimum C grade in LING 220 is required for admission.

Linguistics and anthropology are kindred disciplines, each concerned with culture, cognition and social relations. Students will acquire practical multidisciplinary expertise in anthropological aspects of language study.

The joint major is of special interest to those pursuing the certificate in First Nations language proficiency or the certificate in native studies research, as well as to students interested in the anthropology of language, anthropological linguistics, or cognitive science.

Lower Division Requirements
Anthropology
Students must complete all of
SA 101-4 Introduction to Anthropology
SA 201-4 Anthropology of Contemporary Life
SA 255-4 Introduction to Social Research
and one of
SA 100-4 Perspectives on Canadian Society
SA 150-4 Introduction to Sociology
plus four additional credit hours in a 200 division SA or A course.

Highly Recommended
SA 286-4 Aboriginal Peoples and British Columbia: Introduction

Linguistics
Students must complete both of
LING 130-3 Practical Phonetics
LING 220-3 Introduction to Linguistics
plus six additional credit hours in 100 and 200 division LING courses.

Note: That LING 221 and 222 are required for most upper division LING courses.

Upper Division Requirements
Anthropology
Students must complete both of
SA 301-4 Contemporary Ethnography (A)
SA 356-4 Ethnography and Qualitative Methods (SA)
plus 12 additional credit hours in upper division SA courses. The following courses are recommended.
SA 323-4 Symbol, Myth and Meaning
SA 386-4 Native Peoples and Public Policy
SA 402-4 The Practice of Anthropology
SA 472-4 Anthropology and the Past

Linguistics
Students must complete three of
LING 321-3 Phonology
LING 322-3 Syntax
LING 323-3 Morphology
LING 324-3 Semantics
LING 330-3 Phonetics
LING 331-3 Description and Analysis of a First Nations Language I
and one of
LING 309-3 Sociolinguistics
LING 332-3 Description and Analysis of a First Nations Language II
LING 408-3 Field Linguistics
plus nine additional upper division LING credit hours. The following courses are recommended.
LING 407-3 Historical Linguistics
LING 430-3 Native American Languages
LING 441-3 Linguistic Universals and Typology

Certificate in First Nations Language Proficiency
This program is for students who wish to acquire conversational and literacy skills in a particular First Nations language, to teach this language in elementary or secondary schools, or to enhance their knowledge of a First Nations language for cultural reasons or professional objectives.

The certificate consists of 27 credit hours. At least 12 must be earned by completing courses in the First Nations language itself. The certificate can be taken on a full or part time basis. Advanced placement through course challenge to a maximum of nine credit hours is possible for fluent speakers. Credit may be applied to a specific language and is achieved by...
examination from an instructor in that language with the approval of the department.

**Program Requirements**

Students must complete or achieve equivalent credit for the following:
- LING 130-3 Practical Phonetics
- LING 220-3 Introduction to Linguistics
- LING 231-3 Introduction to a First Nations Language I
- LING 232-3 Introduction to a First Nations Language II
- LING 331-3 Description and Analysis of a First Nations Language*  
- LING 332-3 Description and Analysis of a First Nations Language II*

In addition, students must complete at least nine credit hours selected from the following courses.
- LING 241-3 Languages of the World
- LING 260-3 Language, Culture and Society
- LING 280-3 First Nations Language Immersion
- LING 335-3 Topics in First Nations Language I
- LING 360-3 Linguistics and Language Teaching
- LING 430-3 Native American Languages
- LING 431-3 Language Structures I*
- LING 432-3 Language Structures II*
- LING 433-3 First Nations Language Mentoring I*
- LING 434-3 First Nations Language Mentoring II*
- LING 435-3 Topics in First Nations Language II*

*these courses may only be counted towards a certificate if the subject matter of each is the same First Nations language

**Certificate in Teaching ESL Linguistics**

This certificate is for students seeking a basic introduction to principles and theory underlying current approaches to the teaching of English as a second language (TESL). The program emphasizes an understanding of linguistics and applied linguistics concepts. Successful completion of a 30 hour practicum in an adult ESL program is also required. The certificate requires at least four to five terms to complete and may be earned concurrently with an honors, major, extended minor or minor in linguistics.

While the certificate by itself is not a specific employment credential, it constitutes basic preparation for teaching English language skills to adult learners. The certificate also provides preparation for further applied linguistics and TESL studies. Those pursuing a long-term TESL career should plan to take more advanced studies upon completion of the program. Monolingual students are strongly advised to take at least two courses (six credit hours) in a language other than English.

**Admission Requirements**

Admission to the program is not automatic. All candidates must complete the required application form (available from the Department of Linguistics) and submit it with a statement of purpose and all other required documentation prior to one of the three deadlines (September 30, January 31, May 31) each academic year. An interview with a designated member of the linguistics department is also required. Prospective students may begin taking courses in the certificate program prior to being admitted to it. However, students are strongly advised to apply as soon as possible after completing LING 130 and 220. Students who delay their applications until late in their program of studies may find that they are unable to enroll in the required courses at the desired time.

In addition to meeting the normal Simon Fraser University admission requirements, students must demonstrate an excellent command of spoken and written English. This requirement is more stringent than the University's minimum English language requirement. Students whose first language is not English should consult the department for details well in advance of applying. The oral communication skills of all applicants will be assessed during the interview. Applications are evaluated on the basis of merit. The department will consider academic standing, communication skills as assessed during the required interview, interests and motivations as identified in the statement of purpose, and personal qualities identified during the interview. Priority will be given to students who are enrolled in a degree program at Simon Fraser University at the time of application.

**Program Requirements**

The program requires successful completion of 31 credit hours as set out below, with a minimum 2.00 GPA calculated on the basis of grades in the specified required courses. Students also must complete a supervised practicum (LING 363) which includes 25 to 30 hours of experience in an adult ESL classroom.

**Lower Division**

Required courses
- LING 110-3 The Wonder of Words
- LING 130-3 Practical Phonetics
- LING 200-3 Introduction to the Description of English Grammar
- LING 220-3 Introduction to Linguistics 12 credit hours

plus two of
- EDUC 220-3 Introduction to Educational Psychology
- LING 221-3 Introduction to Phonology
- LING 241-3 Languages of the World
- LING 260-3 Language, Culture, and Society

**Upper Division**

Required courses
- EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
- LING 360-3 Linguistics and Language Teaching
- LING 362-3 English as a Second Language: Theory
- LING 363-3 English as a Second Language: Practice 13 credit hours

Recommended courses
- EDUC 468-4 Cognition and Language in ESL
- LING 350-3 First Language Acquisition

**Post Baccalaureate Diploma in Teaching English as a Second Language**

This program is under revision and admission is suspended. For further information, contact the department.

The Department of Linguistics and the Faculty of Education jointly offer this program. Students should apply to the departmental advisor for admission to the program and should seek admission to the University separately. Applicants will be admitted by the joint steering committee consisting of members of the Department of Linguistics and the Faculty of Education under the following general requirements.

- completion of a bachelor's degree
- demonstrated knowledge of spoken and written English. See “English Language and Literacy Admission Requirement” on page 19.
- an undergraduate concentration in one or more related disciplines such as linguistics, education, English or psychology. Completion of the certificate in TESL linguistics, or equivalent preparation is accepted as fulfilling this requirement. Students may be admitted providing they take LING 310-6 in addition to the general program requirements.

- some academic training or demonstrated ability in a language other than English

**Course Requirements**

Students complete a 31 credit hour minimum chosen from linguistics, education and individual and social development. The requirements are as follows.

**Linguistics**

The program requires an understanding of general linguistics theory and analysis principles, English language linguistic structure and acquaintance with structures of the languages of English learners.

Students must take 12 credit hours in upper division linguistics courses, consisting of any two of
- LING 321-3 Phonology
- LING 322-3 Syntax
- LING 323-3 Morphology
- LING 324-3 Semantics
- LING 330-3 Phonetics 6 credit hours

**Note:** Students whose undergraduate record includes at least 12 credit hours from the above list or their equivalents must select approved substitutes from among 400 division linguistics courses to fulfil the requirement of six credit hours in this section.

plus any two of
- LING 360-3 Linguistics and Language Teaching
- LING 362-3 English as a Second Language: Theory
- LING 408-3 Field Linguistics
- LING 431-3 Language Structures I
- LING 432-3 Language Structures II
- LING 441-3 Language Universals and Typology
- LING 480-3 Topics in Linguistics I (when offered with a suitable topic)
- LING 481-3 Topics in Linguistics II (when offered with a suitable topic) 6 credit hours

**Education**

Students should be conversant with the principles of language pedagogy, be able to apply this in various classroom situations, have an understanding of testing and assessment principles, and be able to apply these in classroom settings. Also required are practical experience to develop classroom skills specific to teaching English to non-native speakers.

Students are required to complete all of
- EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
- EDUC 470-4 Experience in Teaching Students Who Have Limited English Proficiency 8 credit hours

**Note:** Only students who have a current teaching placement should enrol in EDUC 470. In exceptional circumstances, alternative arrangements may be made after consultation with the steering committee.

plus 8-12 credit hours chosen from
- EDUC 325-3 Assessment for Classroom Teaching
- EDUC 342-3 Contemporary Approaches to Literacy Instruction
- EDUC 367-4 Teaching Children from Minority Language Backgrounds in Elementary Classrooms
- EDUC 422-4 Learning Disabilities
- EDUC 424-4 Learning Disabilities: Laboratory
- EDUC 468-4 Cognition and Language in ESL 8-12 credit hours

**Note:** Those with credit for courses in this list through previous programs may not take them for further credit. Those with prior credit for EDUC 467 or the equivalent must select an alternative from this list.

**Individual and Social Development**

Theories of human development and language use, their implications for the classroom, and of the sociocultural context of learners and speakers

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represents a basic component in the preparation for language teaching. Students must complete any one of the following courses that has not been completed previously. 

EDUC 320-3 Instructional Psychology
EDUC 326-3 Classroom Management and Discipline
EDUC 420-4 Cognitive Strategies in Learning
EDUC 422-4 Learning Disabilities
EDUC 425-4 School Counselling for the Classroom Teacher
EDUC 441-4 Multicultural Education
LING 309-3 Sociolinguistics
LING 350-3 First Language Acquisition
SA 400-4 Canadian Ethnic Minorities

Language Learning Centre
3020 Academic Quadrangle, 778.782.4698 Tel, www.sfu.ca/language-learning-centre

The centre provides instructional support for language teaching through lab facilities, materials library, language instructors and student consultation. A multimedia language lab provides integrated computer, audio, and video resources in separate classroom and drop-in facilities.

Certificate in Spanish Language Proficiency
This program is for elementary and secondary school teachers, and undergraduates, wishing to improve Spanish oral and written proficiency. [Note that Spanish is not considered a 'teachable subject' for professional development program (secondary) application,] it is also for those who want to enhance their Spanish language knowledge for cultural, professional or employment purposes, or who desire official certification of Spanish proficiency. However, the Certificate in Spanish Language Proficiency (CSPf) is not meant for native Spanish speakers. Courses are offered during the day and evening. Additionally, a sequential offering of courses is scheduled, subject to sufficient enrolment, at the Simon Fraser University Vancouver campus each term.

Requirements
Students must successfully complete all of SPAN 102-3 Introductory Spanish I
SPAN 103-3 Introductory Spanish II
SPAN 201-3 Intermediate Spanish I
SPAN 202-3 Intermediate Spanish II
SPAN 204-3 Spanish Vocabulary
SPAN 302-3 Spanish Conversation through Cinema
SPAN 303-3 Spanish Conversation and Composition
SPAN 304-3 Advanced Spanish Conversation and Composition
SPAN 306-3 Spanish-English Translation

plus two of
LING 130-3 Practical Phonetics
LING 260-3 Language, Culture and Society
SPAN 301 Advanced Spanish Grammar and Writing
SPAN 305-3 Spanish for Business

Notes:
Exemption of up to 12 credit hours from lower division Spanish language courses (SPAN 102, 103, 201 and 202 only) is possible through Advanced Placement; students must demonstrate equivalent preparation. The exempted courses are replaced with credit obtained by:
- approved transfer credit for Spanish courses taken at another post-secondary institution (subject to University regulations governing transfer credit approval), up to a maximum of six credit hours or
- challenge credit for exempted courses (subject to University regulations governing challenge credit approval), up to a maximum of 6 credit hours and/or
- successful completion of other Spanish courses at Simon Fraser University.

Students who have completed the Spanish 12 program in Canadian high schools will not be admitted to any 100 or 200 Chinese but speak a dialect other than Mandarin or Spanish is not considered a 'teachable subject' for Spanish 101 and 102 only is possible through Advanced Placement; students must demonstrate equivalent preparation. The exempted courses are replaced with credit obtained by:
- approved transfer credit for Spanish courses taken at another post-secondary institution (subject to University regulations governing transfer credit approval), up to a maximum of six credit hours or
- challenge credit for exempted courses (subject to University regulations governing challenge credit approval), up to a maximum of 6 credit hours and/or
- successful completion of other Spanish courses at Simon Fraser University.

Course Challenge
Up to 12 lower division Spanish credit hours may be challenged for credit. Students wishing to challenge any or all of these must enroll in the courses to be

Co-operative Education
This program, for qualified students who wish to acquire practical experience in linguistics, entails planned study and work terms. For admission, students must normally have completed 30 credit hours, including LING 130 and 220, and three other LING courses. At least 15 of the 30 credit hours must be completed at Simon Fraser University with a minimum CGPA of 2.75.

College transfer students must complete at least Simon Fraser University 15 credit hours before becoming eligible for co-op education admission and must satisfy the requirements given above, or their equivalents. College transfers who participated in co-op programs elsewhere may be credited with term(s) already taken. The applicability of such terms depends on the evaluation of the Department of Linguistics.

The following four courses are completed during four work terms.

LING 370-0 Linguistics Practicum I
LING 371-0 Linguistics Practicum II
LING 470-0 Linguistics Practicum III
LING 471-0 Linguistics Practicum IV

Work term arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one term in advance (see “Co-operative Education” on page 237). To continue in the program, students must maintain a minimum 2.75 CGPA in academic course work. Contact the department for further information.

Mathematics Program
K10512 Shrum Science Centre, 778.782.3331/3332 Tel, 778.782.4947 Fax, www.math.sfu.ca

Advisors
Ms. J. Fabricius, K10512 Shrum Science Centre, 778.782.3332 (for enrollment advice)

Additional advisors are available for consultation. Please check the posted list outside the department's general office, or consult the Department of Mathematics website at www.math.sfu.ca.

Students wishing to major in any of the programs sponsored by the Department of Mathematics should seek advice early in their academic careers about program planning from department faculty advisors. For descriptions and prerequisites, see “Mathematics” on page 430, “Mathematics and Computing Science MACM” on page 435 and “Management and Systems Science MESSC” on page 428.

The Department of Mathematics offers a program of study within the Faculty of Arts and Social Sciences leading to a bachelor of arts degree with a major or honors in mathematics. Students interested in a bachelor of science in mathematics should see page 221 in the Faculty of Science section. Requirements for the bachelor of arts in mathematics are set out below.

General Regulations
Students taking a mathematics major or honors for a BA must satisfy the Faculty of Arts and Social Sciences regulations.
Sciences requirements and general University cumulative GPA and credit hour requirements. See “Mathematics MATH” on page 430 for entry level requirements and department workshops. 

Prerequisite Grade Requirement
To enrol in a course offered by the Department of Mathematics, a student must obtain a grade of C- or better in each university level prerequisite course.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major and Honors Programs

Lower Division Requirements
Students must complete either CMPT 125-3 Introduction to Computer Science and Programming or both of CMPT 120-3 Introduction to Computing Science and Programming I CMPT 125-3 Introduction to Computing Science and Programming II and one of MATH 150-4 Calculus with Review I MATH 151-3 Calculus I and all of MACM 101-3 Discrete Mathematics I MACM 201-3 Discrete Mathematics II MACM 202-4 Mathematical Modeling and Computation MATH 152-3 Calculus II MATH 232-3 Elementary Linear Algebra MATH 242-3 Introduction to Analysis I MATH 251-3 Calculus III STAT 270-3 Introduction to Probability and Statistics

Note: With a C grade or better in the relevant course, these substitutions are permitted: MATH 154 or 157 for MATH 151, MATH 155 or 158 for MATH 152. However, where possible, students should take MATH 151 and 152. A grade of C- or higher in MATH 242 is required for admission to the mathematics major or honors programs.

Upper Division Requirements
All students must take at least one from each of the following four groups of courses.

one of MATH 308-3 Linear Optimization MATH 343-3 Applied Discrete Mathematics MATH 345-3 Introduction to Graph Theory and one of MATH 320-3 Introduction to Analysis II MATH 322-3 Complex Variables and one of MATH 332-3 Introduction to Applied Algebraic Systems MATH 342-3 Elementary Number Theory and one of MATH 310-3 Introduction to Ordinary Differential Equations MACM 316-3 Numerical Analysis I BA mathematics major students must obtain at least 30 credit hours in upper division mathematics (MATH), or mathematics/computing science (MACM), or PHYS 413, or from the following statistics (STAT) and actuarial mathematics (ACMA) courses: ACMA 310, STAT 330, 350, 380, 402, 430, 450 and 460. Of the 30 credit hour minimum total required for the mathematics major, at least 24 must come from MATH or MACM courses. At least three of the courses used to satisfy this 30 credit hour requirement must be 400 division, of which at least two must be 400 division MATH or MACM courses. Students may not use a directed studies, job practicum, or honors essay course to fulfill the 400 division requirement.

Honors Program Specific Requirements
In addition to the requirements for the major program, BA honors students must take CMPT 225 and MATH 252 and obtain at least 18 additional credit hours in upper division mathematics (MATH), or mathematics/computing science (MACM) courses, PHYS 413, or from the list of approved STAT and ACMA courses listed under Upper Division Requirements for the Mathematics Major Program. Of this minimum 48 upper division credit hours, at least 36 must come from MATH or MACM courses.

At least five of the courses used to satisfy the 48 credit hour requirement must be at the 400 division, of which at least three must be 400 division MATH or MACM courses. Students may not use a directed studies, job practicum or honors essay course to fulfill the 400 division requirement.

Note: Major or honors mathematics students are advised to take an upper division statistics course and an upper division MACM or CMPT course. 

Majors and Honors Program Electives
The student's program should include at least 65 credit hours in arts subjects. Department of Mathematics courses may be counted. Also, the Faculty of Arts and Social Sciences breadth requirements must be met. Students taking a major must complete at least 45 upper division hours including the major program requirements. Honors students must complete at least 60 upper division credit hours including the honors requirements.

Minor Program
For requirements, see “Department of Mathematics” on page 221 in the Faculty of Science section.

Extended Minor Program
This program consists of the lower division requirements for a major and the upper division requirements for a minor. A student must have their program for the extended minor approved by the department's advisors.

Department of Philosophy
4604 Diamond Building, 778.782.3343 Tel, 778.782.4443 Fax, www.sfu.ca/philosophy
Chair
M. McPherran BA, MA, PhD (Calif)
Professors Emeriti
R.D. Bradley BA, MA (Auck), PhD (ANU) S. Davis BA, MA, PhD (Calg) R.E. Jennings BA, MA (Que), PhD (Lon) R. Resnick BA, PhD (Cornell) N.M. Swartz BA (Harv), MA, PhD (Ind) Professor
F.J. Pelletier BS, MA (Nebraska), MSc, MSc (Alta), PhD (Calif), Canada Research Chair** Associate Professors K. Akins BA (Manit), PhD (Mich) S. Black BA (C'dia), PhD (Camb) M. Hahn BA (S Fraser), MA (Br Col), PhD (Calif) R.P. Hanson BA (Calg), MA, PhD (Prin) O. Schulte BSc (Tor), MS, PhD (Carnegie Mellon)* L. Shapiro BA (Wesleyan), PhD (Pitts) Assistant Professors K. Laird BA (Lond), DPhil (Oxf) E. Tiffany BA (Albin), PhD (Calif)
Senior Lecturers P.T. Horban BA (Sask), MA, PhD (WOnt) J.S. McIntosh BA (S Fraser), PhD (Br Col)
Advisor
Mr. D. Bevington, 4625 Diamond Building, 778.782.4852

*joint appointment with computing science
**joint appointment with cognitive science, linguistics

General Information
All 100 division courses and PHIL 001 improve critical thinking skills, logical analysis, expression of clarity, and teach some of the most important philosophical problems, perspectives and methods. All 100 division courses have no prerequisites, and can be taken in any order by any student in any faculty. The 200 division courses are slightly more advanced with more specific subject matter. It is recommended (not mandatory) that students have completed 15 credit hours of university work or equivalent before enrolling in a 200 division philosophy course. (PHIL 201, 203 and 214 have additional prerequisites.)

For 300 and 400 division courses, students normally must have completed at least six credit hours of lower division philosophy. However, for those majoring in other departments who have a keen interest in a particular upper division course, this requirement may be waived by the department. Four hundred division courses are more advanced than 300 division courses (there is more reading, the reading is more difficult, and more writing is required). Students should complete at least two 300 division courses before enrolling in a 400 division course.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program

Lower Division Requirements
Students are required to complete at least 15 credit hours of lower division credit including one of PHIL 100-3 Knowledge and Reality PHIL 120-3 Introduction to Moral Philosophy and one of PHIL 150-3 History of Philosophy I PHIL 151-3 History of Philosophy II and all of PHIL 201-3 Epistemology PHIL 203-3 Metaphysics PHIL 210-4 Natural Deductive Logic

Upper Division Requirements
Students are required to complete at least 30 credit hours upper division credit including the following courses, and including one course at the 400 division. At least one of PHIL 320-3 Social and Political Philosophy
Joint Major in Philosophy and Humanities
See page 168 for program information.

Joint Honors in Computing Science and Philosophy
See “Joint Honors in Computing Science and Philosophy” on page 117 for information.

SEMINARS AND SPECIAL TOPICS COURSES
A student may not enrol in a philosophy seminar or selected topics course which duplicates work for which the student has received credit in another philosophy seminar or special topics course.

READING LISTS AND COURSE OUTLINES
Course outlines are available at the general office. Some course content varies with instructor.

PROGRAM IN COGNITIVE SCIENCE
See page 138 for program information.

UPPER DIVISION COURSES LISTED BY FIELD (PARTIAL LISTING)

EPistemology and Metaphysics
The following courses are a continuation of PHIL 100, 201 and 203 at a more advanced division.
PHIL 302-3 Topics in Epistemology and Metaphysics
PHIL 455-4 Contemporary Issues in Epistemology and Metaphysics

Logic
The following two courses offer concentrated work in logic and are continuations of PHIL 210 and 214.
PHIL 310-3 Modal Logic and Its Applications
PHIL 314-3 Topics in Logic I

ETHICS
The following continuations of PHIL 120 and 220 present a wide range of issues and topics in ethics, and in political and social philosophy.
PHIL 320-3 Social and Political Philosophy
PHIL 321-3 Moral Issues and Theories
PHIL 322-3 History of Ethics
PHIL 421-4 Ethical Theories

HISTORY OF PHILOSOPHY
The following continuations of PHIL 150 and 151 examine, at a more advanced division, the philosophical foundations of Western culture.
PHIL 322-3 History of Ethics
PHIL 350-3 Ancient Philosophy
PHIL 352-3 17th Century Philosophy
PHIL 356-3 18th Century Philosophy
PHIL 357-3 Topics in the History of Philosophy
PHIL 451-4 Kant

SCIENCE, MIND, LANGUAGE
The following four courses introduce special areas of philosophical interest.
PHIL 341-3 Philosophy of Science
PHIL 343-3 Philosophy of Mind
PHIL 444-4 Philosophy of Language II

DEPARTMENT OF POLITICAL SCIENCE

6067 Academic Quadrangle, 778.782.4293 Tel, 778.782.4788 Fax, www.sfu.ca/politics
Chair
D. Laycock BA (Alta), MA, PhD (Tor)
Professors Emeriti
T.H. Cohn BA (Mich), MA (Wayne), PhD (Mich)
E. McWhinney QC, LLM, SJD (Yale)
F.P. Meyer BA (Wellesley), MA, PhD (Col)
Q. Quo BA (Natl Taiwan), MA (Oregon), PhD (Illinois)
M. Robin BA (Manit), MA, PhD (Tor)
A.H. Somjee MA (Agra), PhD (Lond)
Professors
M.A. Cowell BA (Br Col), MA, PhD (Yale)
L.J. Erickson BA, PhD (Alta)
M. Griffin Cohen BA (Iowa Wesleyan), MA (NY), PhD (York, Can)*
E. Hershberg BA (Indiana), MA, PhD (Wis)
M. Howlett BSc,ScD (Ont), MA (Br Col), PhD (Qu)
D. Laycock BA (Alta), MA, PhD (Tor)
S. McBride BSc (Lond), MA, PhD (McM)
A. Moens BA (Leth), MA (McM), PhD (Br Col)
A. Pieri BA (Harv), MA, PhD (Tor)***
D.A. Ross BA, MA, PhD (Tor)
P.J. Smith BA, MA (McM), PhD (Lond)
H.M. Stevenson BA (Witw), MA, PhD (Mich), PhD (Northwestern), President of the University
P.V. Warwick BA (McM), MA, PhD (Chic)****
Associate Professors
J. Busutmitwi-Sam BA (Ghana), MA (Brock), PhD (Tor)
L. Dobuzinskis LScEcon (Paris), PhD (York, Can)*
A. Heard BA (Dal), MSc (Lond), PhD (Tor)
A. Hira BA (Georgetown), MA (G Washington), PhD (Claremont)***
T. Kawasaki LLB (Doshisha), MA, PhD (Prin)**
S.J. MacLean BS, MA, PhD (Dal)
Assistant Professors
A.J. Ayers BA, MSc (Reading), PhD (Sus)
K. Chenard BA (Birm), MA (Sorbonne), PhD (Laval/Sorbonne)
G. Fuji Johnson BA (S Fraser), MA (LSE), PhD (Thor)
S. Weldon BA (Wittenberg), MA, PhD (Calif)
Advisor
M.S. Kool, 6072 Academic Quadrangle, 778.782.3588
*Joint appointment with women’s studies
**Joint appointment with Asia-Canada, humanities
***Joint appointment with urban studies
****Joint appointment with Latin American studies
*****Joint appointment with international studies
Several programs are offered: honors, major, joint major, extended minor, minor. Students’ programs must meet the Faculty of Arts and Social Sciences breadth requirements. Please see “Writing, Quantitative, and Breadth Requirements” on page 130.
Students may not take upper division courses until the appropriate lower division prerequisites are completed. Specified prerequisites or department permission is required for entry into these courses. Students who fulfill the requirements may also take POL 497, 498 and 499.

FIELDS OF STUDY
The introductory course is POL 100. All others except POL 498 and 499 are divided into five fields of study.

FIELD A POLITICAL THEORY
POL 201-3 Research Methods in Political Science
POL 210-3 Introduction to Political Philosophy
POL 211-3 Politics and Ethics
POL 312-4 History of Political Thought II
**Field B Canadian Government and Politics**

- POL 221-3 Introduction to Canadian Government
- POL 222-3 Introduction to Canadian Politics
- POL 320-4 Canada and Latin America
- POL 321-4 The Canadian Federal System
- POL 322-4 Canadian Political Parties
- POL 323-4 Provincial Government and Politics
- POL 324-4 The Canadian Constitution
- POL 327-4 Globalization and the Canadian State
- POL 329-4 Selected Topics in Canadian Government and Politics
- POL 347-4 Introduction to Canadian Foreign Policy
- POL 422-4 Canadian International Security Relations
- POL 423-4 BC Government and Politics
- POL 424-4 Quebec Government and Politics
- POL 426-4 Canadian Political Behaviour
- POL 428-4 Selected Topics in Canadian Government and Politics I
- POL 429-4 Selected Topics in Canadian Government and Politics II

*these courses may require special prerequisites

**Field C Comparative Government and Politics**

- POL 231-3 Introduction to Comparative Government and Politics
- POL 232-3 US Politics
- POL 333-4 Soviet and Post-Soviet Political Systems
- POL 334-4 East European Political Systems
- POL 335-4 Government and Politics: People’s Republic of China I
- POL 336-4 Government and Politics: People’s Republic of China II
- POL 337-4 Government and Politics: Selected Latin American Nations I
- POL 339-4 Selected Topics in Comparative Government and Politics
- POL 381-4 Politics and Government of Japan I
- POL 431-4 Comparative Western European Systems
- POL 432-4 Comparative Communist and Post-Communist Political Systems
- POL 433-4 Comparative Developing Systems
- POL 435-4 Comparative Federal Systems
- POL 436-4 Elections, Parties and Governments in Comparative Perspective
- POL 437-4 Governance and Globalisation
- POL 438-4 Selected Topics in Comparative Government and Politics I
- POL 439-4 Selected Topics in Comparative Government and Politics II
- POL 441-4 Comparative Foreign Relations: Selected Political Systems
- POL 481-4 Ethnic Politics and National Identity: Comparative Perspectives
- POL 483-4 Political Economy of Latin American Development

*these courses may require special prerequisites

**Field D International Relations**

- POL 241-3 Introduction to International Politics
- POL 341-4 International Integration and Regional Association
- POL 342-4 Relations between Developed and Developing Nations
- POL 343-4 Global Political Economy
- POL 344-4 Public International Law
- POL 345-4 The Nation-State and the Multinational Corporation
- POL 346-4 International Organizations
- POL 347-4 Introduction to Canadian Foreign Policy
- POL 348-4 Theories of War, Peace and Conflict Resolution
- POL 349-4 Selected Topics in International Relations
- POL 373-4 Human Security
- POL 422-4 Canadian International Security Relations
- POL 440-4 Latin American International Relations
- POL 441-4 Comparative Foreign Relations: Selected Political Systems
- POL 442-4 The Politics of International Trade
- POL 443-4 Nuclear Strategy, Arms Control and International Security
- POL 444-4 Politics and Foreign Policy of the European Union
- POL 445-4 American Foreign Policy: Processes, Issues
- POL 446-4 International Relations in East Asia
- POL 447-4 Theories of International Political Economy
- POL 448-4 Selected Topics in International Relations I
- POL 449-4 Selected Topics in International Relations II
- POL 450-4 Globalization and Regional Politics in Latin America

*these courses may require special prerequisites

**Field E Public Policy/Administration and Local Government**

- POL 151-3 The Administration of Justice
- POL 251-3 Introduction to Canadian Public Administration
- POL 252-3 Local Democracy and Governance
- POL 351-4 The Public Policy Process
- POL 352-4 Urban and Local Government in Canada
- POL 353-4 Public Sector Management
- POL 354-4 Comparative Metropolitan Governance
- POL 355-4 Governing Instruments
- POL 356-4 The Political Economy of Labor
- POL 359-4 Selected Topics in Governance
- POL 451-4 Public Policy Analysis
- POL 454-4 Urban Public Policy Making
- POL 455-4 Issues in Economic and Social Policy
- POL 457-4 Controversies in Policy Innovation and Design
- POL 458-4 Selected Topics in Local and Urban Governance
- POL 459-4 Selected Topics in Governance

*these courses may require special prerequisites

**Writing, Quantitative, and Breadth Requirements**

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative, and Breadth Requirements" on page 7 for information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

**Honors Program**

Students with a 3.0 CGPA and an upper division GPA of 3.33 are encouraged to apply for the honors program. A complete application, available from the departmental advisor, includes the essay proposal for POL 499 (Honors Thesis) and a letter of evaluation from the faculty member who agrees to supervise and evaluate the essay. Once the application is submitted, it is reviewed by the undergraduate studies committee in the term prior to honor program entrance.

**Lower Division Requirements**

Students must complete

- POL 100-3 Introduction to Poltics and Government (or 101W)
- POL 210-3 Introduction to Political Philosophy and one of
- IS 240-3 Research Methods in International Studies
- POL 201-3 Research Methods in Political Science
- STAT 203-3 Introduction to Statistics for the Social Sciences

If students plan to take both POL 201 and STAT 203, a field A credit may be claimed for POL 201. In this case, POL 201 should be taken before STAT 203. In addition, nine lower division POL credit hours, covering at least three of the five fields of study, are required.

- students may not take both of IS 240 and POL 201 for credit.

If students plan to take both POL 201 and STAT 203, a Field A credit may be claimed for POL 201. In this situation, POL 201 should be taken before STAT 203. In addition, 9 lower division POL credit hours, covering at least three of the five fields of study, are required.

**Upper Division Requirements**

Students must complete 53 upper division POL credit hours, including five for POL 499 (Honors Essay). An additional 16 of these 53 must be at the 400 division.

POL 315 is strongly recommended.

**French Language Cohort Program in Public Administration and Community Services**

198-A Cornerstone Building, 778.782.6858 Tel, 778.782.6682 Fax, www.sfu.ca/frcohort,
frcohort@sfu.ca

This cohort program, leading to a political science major with a French extended minor, or a French major with a political science extended minor, is primarily for French immersion and Francophone students who wish to develop their French language ability. It is most suitable for those entering directly from secondary school who plan to undertake full time study over a four year period. The program prepares students for French language public administration and community service careers, and for graduate study in political science or public administration, or French.

A substantial proportion of the program’s instruction will be given in the French language, both in the
Departments of French and Political Science, and in specially offered courses in other departments. Through elective study, students may also complete the social studies requirements for the Professional Development Program in the Faculty of Education, an option that is recommended for teaching at the primary or secondary level.

Non-French Cohort Program students who wish to enroll in French Cohort Program courses taught in French must contact the French Cohort Program advisor.

**Admission Requirements**

The cohort program (see below) begins in the fall term only, and is for those who have adequate competency in French, as determined by the French language placement test. As it is a cohort program in which students will move together through a significant portion of their undergraduate studies, those with substantial university transfer credit may need to take more than the normal 120 credit hours to complete this program.

**Cohort Program**

A feature of this program is the group cohort setting where program students work together in the same specially designed cohort courses. Cohort specific courses and course sections will be offered in French, while some required and elective courses will be taught in English. A list of designated program courses, including the language of instruction and the schedule of course offerings, can be found at www.sfu.ca/cohort.

In addition, at least one term at a Francophone university is included in this program.

**Designated Courses**

Specific courses designated as part of the cohort program and the specified language of instruction may vary from time to time. Required courses, as set out below, are designated as cohort specific (cs), are taught in French, and will normally be open only to cohort students. Regular (r) courses will be taught in English, except for those in the Department of French, which will be taught in French.

**Political Science Major, French Extended Minor Program Requirements**

**Lower Division Requirements**

Students must complete 18 political science credit hours as follows, 12 credit hours of which will be taught in French:

- one of POL 100-3 Introduction to Politics and Government (cs) or 101W
- POL 201-3 Research Methods in Political Science (r)
- POL 210-3 Introduction to Political Philosophy (cs)
- POL 221-3 Introduction to Canadian Government (cs)
- POL 223-3 Canadian Political Economy (r)
- POL 251-3 Introduction to Canadian Public (cs) Administration

Students must also complete 18 credit hours of French as follows, including four cohort-specific courses.

- FREN 212-3 French for Immersion Program
- FREN 221-3 French Writing I (cs)*
- FREN 222-3 French Writing II (cs)
- FREN 225-3 Topics in French Language (cs)
- FREN 230-3 Introduction to French-Canadian Literature (r)
- FREN 270-3 Introduction to French Linguistics I (r)

*Students receiving advanced placement above the level of this course may receive permission to waive or challenge it.

**Upper Division Requirements**

Students must complete 32 credit hours of political science courses, including the four cohort-specific courses as shown below.

- POL 329-4 Selected Topics in Canadian Government and Politics
- POL 359-4 Selected Topics in Governance
- POL 459-4 Selected Topics in Governance: Planning Community-based Projects
- POL 497-4 Directed Practice in Political Science

An additional four upper division political science courses are required, which must include one course in the field of Canadian government and politics, and one in the field of public policy/administration and local government (POL 351 is recommended). Normally, two or three of these courses, equivalent to at least eight credit hours, will be selected from transferable political science courses offered at the institution hosting the Francophone term. Students must also complete an additional 15 credit hours of French as specified below.

Students complete FREN 301-3 Advanced French Composition and one of FREN 425-3 Topics in the Varieties of French

FREN 452-3 Topics in French Cultures

A further nine credit hours of French, to be chosen from among the remaining courses at the 300 and 400 division, must be completed. (FREN 360 and/or 370 may be taken in partial fulfillment of this requirement.)

**Additional Requirements**

In addition, up to 17 credit hours in other departments may be required in either lower or upper division courses. Such additionally designated courses will usually be taught in French, and will be subjects directly related to the program. These additional courses will be designated at the beginning of each entering cohort. Overall, cohort students may expect at least 80 credit hours of instruction in French.

**French Major, Political Science Extended Minor Program Requirements**

**Lower Division Requirements**

These requirements are the same as those shown above for the political science major, French extended minor program.

**Upper Division Requirements**

Students must complete 16 credit hours of political science courses for the extended minor and 32 credit hours of French courses, including all requirements for the French major (see "Honors, Major, Extended Minor Programs" on page 158).

**Additional Cohort Requirements**

The courses listed below are those that will typically be required to complete the cohort program. Other appropriate courses may occasionally be substituted.

**History**

HIST 101-3 Canada to Confederation (r)
HIST 204-3 The Social History of Canada (cs)

**Canadian Studies**

CNS 210-3 Foundations of Canadian Culture (cs)

**Humanities**

HUM 321-4 The Humanities and Critical Thinking (cs)

**Electives**

The courses listed as cohort requirements constitute 99 credit hours, 81 of which will be obtained through courses taught in French (as outlined above). The remaining required 21 credit hours may be chosen from other university courses. Students intending to pursue graduate work, or a career in public administration, are advised to include ECON 103, 105, and STAT 203 among their electives. Students should also be aware of general university requirements when planning their electives. Assistance in planning electives to meet additional program requirements is available from the cohort program advisor.

**Minor Program**

**Lower Division Requirements**

Students must complete one of POL 100-3 Introduction to Politics and Government
POL 101W-3 Introduction to Politics and Government

and at least nine additional credit hours in lower division POL courses.

**Upper Division Requirements**

Students are required to complete 16 upper division credit hours in any of the fields of study.

**Extended Minor Program**

This program is based on the lower division requirements (100 and 200 division courses) of the major program and the upper division requirements (300 and 400 division courses) of the minor program.

**Joint Major in French, History and Politics**

Please see “Joint Major in French, History and Politics” on page 159 for information.

**Joint Major in Political Science and Canadian Studies**

The lower division requirements are identical to the political science major program except that students are encouraged but not required to take POL 201 or STAT 203. Political science upper division requirements follow. Students complete 32 credit hours in three of five fields of study. Up to 12 credit hours that are available for credit in both political science and Canadian studies may count toward upper division requirements of both departments. See the political science or Canadian studies advisor or see “Joint Major Programs” on page 136.

**Joint Major in Political Science and Economics**

This program explores the fields of political science and economics, and develops an appreciation of the ways in which economic and political phenomena condition and interact in the modern world. Consult advisors in both departments.

**Lower Division Requirements**

**Political Science**

Students must complete all of POL 100-3 Introduction to Politics and Government (or 101W)

POL 221-3 Introduction to Canadian Government

POL 222-3 Introduction to Canadian Politics

POL 251-3 Introduction to Canadian Public Administration

plus one of

BUEC 232-3 Elementary Economic and Business Statistics I

CRIM 220-3 Research Methods in Criminology

ISO 240-3 Research Methods in International Studies

POL 201-3 Introduction to Research Methods in Political Science*

PSYC 201-4 Research Methods in Psychology

SA 265-4 Introduction to Social Research
Students must complete at least one of the following eight credit hours in field E: Beyond field E, the following are highly recommended:

- POL 313-4 Political Ideologies
- POL 321-4 The Canadian Federal System
- POL 342-4 Relations Between Developed and Developing Nations
- POL 343-4 Global Political Economy
- POL 345-4 The Nation-State and the Multinational Corporation
- POL 427-4 The Legislative Process in Canada
- POL 447-4 Theories of International Political Economy

**Economics**

Students complete at least 25 credit hours of upper division credit in economics including all of

- BUEC 333-3 Elementary Economic and Business Statistics I
- ECON 301-5 Microeconomic Theory I: Competition Behavior
- ECON 305-5 Intermediate Macroeconomic Theory and at least one 400 division ECON or BUEC course (excluding ECON 431, 435 and BUEC 433).

Finally, to meet the Department of Economics' group requirements for the economics major program, students must take at least one of

- ECON 102-3 The World Economy
- ECON 110-3 Foundations of Economic Ideas
- ECON 208-3 History of Economic Thought
- ECON 250-3 Economic Development in the Pre-Industrial Period
- ECON 309-5 Introduction to Marxian Economics
- ECON 353-4 Economic History of Canada
- ECON 355-4 Economic Development
- ECON 356-5 Comparative Economic Systems
- ECON 404-3 Honors Seminar in Methodology of the Social Science
- ECON 407-3 Seminar in Marxian Economics
- ECON 409-3 Seminar in Economic Thought
- ECON 450-3 Seminar in Quantitative Economic History
- ECON 451-3 Seminar in European Economic History
- ECON 456-3 Seminar in Economic Development

**Statistics and Mathematics**

Students must complete at least 25 credit hours in statistics and mathematics including:

- STAT 203-3 Introduction to Statistics for the Social Sciences
- STAT 270-3 Introduction to Probability and Statistics
- STAT 271-3 Introduction to Probability and Statistics

**Joint Major in Political Science and Latin American Development Studies**

Political science requirements are identical to the major program except that students are encouraged but not required to take POL 201 or STAT 203. POL 337 may not be used to satisfy Latin American development studies requirements. For further information see the political science or Latin American Development Studies advisors. For details, see *Joint Major Programs* on page 170.

**Upper Division Requirements**

- **Political Science**
  - Students complete 24 credit hours from at least three political science fields of study, including a minimum of eight credit hours (two courses) in field E. Beyond field E, the following are highly recommended:
  - POL 313-4 Political Ideologies
  - POL 321-4 The Canadian Federal System
  - POL 342-4 Relations Between Developed and Developing Nations
  - POL 343-4 Global Political Economy
  - POL 345-4 The Nation-State and the Multinational Corporation
  - POL 427-4 The Legislative Process in Canada
  - POL 447-4 Theories of International Political Economy

- **Economics**
  - Students complete at least 25 credit hours of upper division credit in economics including all of
  - BUEC 333-3 Elementary Economic and Business Statistics I
  - ECON 301-5 Microeconomic Theory I: Competition Behavior
  - ECON 305-5 Intermediate Macroeconomic Theory
  - ECON 306-5 Comparative Economic Systems
  - ECON 404-3 Honors Seminar in Methodology of the Social Science
  - ECON 407-3 Seminar in Marxian Economics
  - ECON 409-3 Seminar in Economic Thought
  - ECON 450-3 Seminar in Quantitative Economic History
  - ECON 451-3 Seminar in European Economic History
  - ECON 456-3 Seminar in Economic Development

For details, see *Co-operative Education* on page 237. Work term arrangements are made with the Faculty of Arts and Social Sciences co-op coordinator at least one term in advance.
UNDERGRADUATE

Major Program
To be admitted to the major program, students must have completed a final course grade of C (2.0) or better in each of the following courses.

PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
PSYC 201-4 Introduction to Research Methods in Psychology
PSYC 207-3 Introduction to History of Psychology

PSYC 210-4 Introduction to Data Analysis in Psychology

Note: The above requirement applies to courses transferred from other institutions as well as to courses taken at Simon Fraser University.

PSYC 100 should be taken in the first term and PSYC 102 should follow PSYC 100 as early as possible. (Concurrent enrollment in PSYC 100 and 102 is not permitted.) PSYC 201 and 210 should be taken during the first four terms.

To receive a major in psychology, students must
• meet the graduation requirements of the University (see “Student Appeals” on page 36) and Faculty of Arts and Social Sciences (see “Graduation GPA Requirements” on page 131)
• complete one course from group A: PSYC 221 or 280
• complete two courses from group B: PSYC 241, 250, 260, 268, 270
• complete PSYC 300 with a grade of C or better
• complete 30 upper division psychology credit hours. No more than six directed studies credit hours may be applied to the major. A minimum of 15 upper division psychology credit hours must be completed at Simon Fraser University.

Honors Program
The application form and information hand-out are available at the psychology general office. Application deadline: May 1.

Admission Requirements
• completion of 75 hours with a minimum 3.33 CGPA
• a minimum CGPA of 3.33 over all Simon Fraser University courses
• completion of 15 Simon Fraser University psychology credit hours with a minimum 3.0 CGPA
• a minimum 3.33 CGPA in PSYC 100, 102, 201, 207 and 210
• completion of one course from group A and two courses from group B
• completion of PSYC 300 with a grade of C or better
• completion of PSYC 301 with a minimum C grade

Attendance at an honors information session
Approval and signature of a psychology department faculty member to supervise the honors project

Continuation
• maintain a minimum 3.0 CGPA for all courses taken in each term
• maintain a minimum 3.0 CGPA for all psychology courses taken in each term
• attend the appropriate graduate area research seminar while enrolled in PSYC 490/499.

Students not meeting the requirements may be dropped from the program, but may apply for readmission at a later date.

Completion
Students must complete 60 upper division credit hours, of which 50 must be in upper division psychology courses, including both of

PSYC 490-4 Honors Project
PSYC 499-6 Honors Project

*together comprise the honors project and are taken only after completion of 90 credit hours, with at least 20 credit hours in upper division psychology courses.

No more than nine upper division credit hours may be in directed studies. Up to 12 upper division credit hours may be approved options from other departments.

Students must also meet the University's and Faculty of Arts and Social Sciences' honors graduation requirements and obtain certification by the undergraduate studies committee that the program has been satisfactorily completed.

Minor Program
To be admitted, students must obtain a final course grade of C (2.0) or better in each of the following:

PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
PSYC 201-4 Introduction to Research Methods in Psychology

Note: The above requirement applies to courses transferred from other institutions as well as to courses taken at Simon Fraser University.

Students must complete one of PSYC 221-3 Introduction to Cognitive Psychology
PSYC 241-3 Introduction to Abnormal Psychology
PSYC 250-3 Introduction to Developmental Psychology
PSYC 263-3 Introduction to Social Psychology
PSYC 268-3 Introduction to Law and Psychology
PSYC 270-3 Introduction to Theories of Personality

PSYC 280-3 Introduction to Biological Psychology

Students who are approved majors or honors in criminology, intend to minor in psychology, and have successfully completed CRIM 220 (with a final course grade of C [2.0] or better), may request a waiver for PSYC 201 by petitioning the psychology undergraduate advisor. If this waiver is granted, an additional three credit upper division psychology course must be selected to replace PSYC 201.

Extended Minor Program
An extended minor consists of all major program lower division requirements and all minor program upper division requirements. Programs must be approved by the extended minor program advisor.

Joint Major in Psychology and Business Administration
See page 196 for information.

Joint Major in Psychology and Criminology
See page 149 for information.

Joint Major in Psychology and Women's Studies
See page 180 for information.
Co-operative Education

Co-operative education, for qualified students who want work experience, entails study terms and employment in the area of the student’s choice.

Note: This program will not provide training in clinical psychology or therapeutic techniques.

For admission, 30 credit hours with a minimum 3.0 CGPA is required. Prior to admission, students must complete PSYC 100, 102, 201 and 210 or their equivalents. Transfer students must complete at least 15 credit hours at Simon Fraser University. See “Co-operative Education” on page 237. Work arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator who should be consulted at least one term in advance.

Advice to Students from Other Departments

To enroll in psychology courses, students must meet the prerequisites or special instructions. The listed prerequisites indicate the minimal background expected by instructors.

The department reserves one hundred per cent of all 300 and 400 division PSYC courses for approved psychology major, minor or honors students. Those who are not approved cannot enrol in these upper division courses until the open enrolment date, which is usually day 21 of the enrollment period.

Psychology and Statistics

A level of statistical sophistication is required before undertaking independent research or evaluating research of others. The department offers several courses in research methodology and data analysis: PSYC 201, 210, 301, 411. Students who have a special interest in more extensive statistical training should consider courses from STAT 270 and above, and in particular, STAT 270, 302, 330, 403, 410 and 430.

Directed Studies Courses

PSYC 493, 494, and 495 are directed studies courses. Enrollment in these courses enable an individual or small group to work with a faculty member on a reading or research project of mutual interest. Common reasons for a student requesting such a course are:

- to continue a reading or research project begun in a 400 division seminar course
- to cover material not included in regular courses

The minimum entry requirements are a B (3.0) average, at least 60 credit hours and department permission. Directed studies course students complete an application form (available in the department) with the intended instructor.

Department of Sociology and Anthropology

5054 Academic Quadrangle, 778.782.3146 Tel, 778.782.5799 Fax, www.sfu.ca/sociology

Affiliation with the two divisions within the department is shown as follows: A – anthropology; S – sociology

Chair
J. Pulkingham MA, PhD (Edin)

Professors Emeriti
H. Adam Dipl Soc (Graz), DPhil (Fran), Habilitation – S
H. Sharma MA (Delhi), MS (Cleveland), PhD (Cornell) – S
I.R. Whitaker MA (Camb), DPhil (Oslo) – A
R.W. Wyllie BA (Leic) – S

Professors
P. Dossa BA, MA (Edin), PhD (Br Col) – A
N. Dyck BA, MA (Sask), PhD (Manc) – A
A. McLaren BA (Br Col), MA (Iowa), PhD (Lond) – S
R.J. Menzies BA (York, Can), MA, PhD (Tor) – S
C.K. Patton BA (Appalachian State), MTS (Harvard), PhD (Mass), Canada Research Chair*** – A
G. Otero BA (IT Monterrey), MA (Tex), PhD (Wis) – S
G.B. Teypole BA, MA (Tor), DPhil (Sus) – S

Associate Professors
M. Boelicher Ignace MA (Georg August Unistrat), PhD (S Fraser)** – A
W. Chan BA (Carl), MA (Sheff), MAPhiP, DPhil (Camb)
D.E. Chunn BA (Br Col), MA, PhD (Tor) – S
D. Culhane BA, PhD (S Fraser) – A
M. Gates BA (Sheff), MA, PhD (Br Col) – A
D. Lacombe BA (Shef), MA, PhD (Tor) – S
B. Mitchell BA, MA (Wat), PhD (McM)*** – S
S. Pigg BA, MA, PhD (Cornell) – A
J. Pulkingham MA, PhD (Edin) – S

Assistant Professors
Y. Atasoy BSc (AcadSocSc, Ancara), MSc (MidEastTech, Ancara), PhD (Tor) – S
F. DeMaio BA (Tor), MA (Essex), PhD (Essex) – S
K. Froschauer BA, MA (Br Col), PhD (Carl) – S
M. Hathaway BA (Calif), MS, MA, PhD (Mich) – A
A. Travers BA (S Fraser), MA (Br Col), PhD (Oregon) – S
H. Wittman BA (Wasch), MA, PhD (Cornell) – A
J. Yang BA (Shandong), MA (Beijing Lang Ctre), PhD (Tor) – A

Adjunct Professors
R. Bateman BA, MA (Okotoka), PhD (Johns Hopkins) – A
G. Rush BA (Br Col), PhD (Oregon) – S
S. Migliore, BA, MA, PhD (McM) – A
P. Vahabzadeh BA, PhD (S Fraser) – S

Lecturer
J. Bogardus BA, MA (Br Col), PhD (S Fraser) – A

Advisor
Ms. K. Payne, 5055 Academic Quadrangle, 778.782.3726

Faculty Advisor
Dr. J. Bogardus BA, MA (Br Col), PhD (S Fraser), 5078 Academic Quadrangle, 778.782.6629

**joint appointment with First Nations studies

***joint appointment with women’s studies

The department’s courses provide theoretical understanding of the social and cultural processes affecting our lives and other societies leading to more effective participation in society. Simon Fraser University sociologists and anthropologists conduct research and teach courses about Western industrial societies, Third World societies, and theoretical and comparative questions that go beyond national boundaries.

The department offers honors and majors in sociology and/or anthropology and minors in sociology and anthropology. Honors and major students may take options such as an applied social research stream and a co-operative education program. Joint majors are available with archaeology, art and culture studies, Canadian studies, communication, criminology, Latin American development studies, linguistics, and women’s studies. Joint honors are available with Canadian studies, Latin American development studies and sociology and anthropology. The department also offers a certificate in ethnic and cultural relations.

As well as its intrinsic intellectual rewards, undergraduate training in sociology and anthropology provides invaluable background for students who intend to pursue careers in such fields as urban planning, journalism, law, public administration, welfare related professions, teaching, personnel management, health care fields, and international development projects.

Courses provide students specializing in other disciplines with an appreciation of social and cultural processes that complement their specialization. Especially appropriate are SA 100, 101, 150, 201, 286, which require no prerequisites. Other courses dealing with important contemporary issues such as SA 203, 218 and 260 are open to students with one introductory course.

Course Selection

Consult department hand-outs available in the SA general office, as there are differing emphases in course outlines from term to term.

Normally, directed readings courses SA 496 and 497 are available only to SA major and honors students. Credit will be given for only one of these.

Some courses in other departments are relevant to certain areas of sociology and anthropology. Honors and majors in sociology and/or anthropology are urged to prepare themselves broadly by taking additional courses in other departments, after consultation with an advisor.

Many graduate schools require a reading knowledge of a language other than English. Those considering graduate studies should include an appropriate second language in their program.

To assist students to plan an interdisciplinary program, the following list of courses identify the three disciplines into which all sociology and anthropology courses are divided. For details about these courses, see “Sociology and Anthropology SA” on page 453 of the Course Catalogue.

Anthropology Courses
SA 101, 205, 245, 286, 301, 318, 323, 332, 352, 401, 402, 451, 472, 486, 496

Sociology Courses
SA 150, 231, 250, 260, 304, 321, 322, 325, 326, 327, 331, 333, 335, 350, 351, 353, 362, 416, 450, 497

Sociology and Anthropology Courses
An SA course can be counted as either sociology or anthropology.


Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Programs

Lower Division Requirements

Lower division requirements provide a broad introduction to both disciplines, to critical analysis of Canadian society, to basic logic and methods used in social research, and to the application of these methods to topics of special interest to students.

Students should complete all lower division requirements before taking upper division courses.

Anthropology Major
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 201-4 Anthropology of Contemporary Life
SA 255-4 Introduction to Social Research
plus one additional ‘A’ course at the 200 division

**Sociology Major**
SA 100-4 Perspectives in Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 250-4 Introduction to Sociological Theory
SA 255-4 Introduction to Social Research
STAT 203-3 Introduction to Statistics for Social Sciences

**Note:** Students with an equivalent post-secondary statistics course are exempt from STAT 203. It is highly recommended that students take SA 255 before taking STAT 203.

**Upper Division Requirements**
Students must meet theory and methods requirements (see program options for specifics). In our information-based society, many employers and most graduate schools require considerable knowledge of conceptualizing research problems, information gathering, analysis and presentation. Students are strongly urged to balance theory courses with methods courses above the minimum and they may choose to range broadly across the two disciplines or to focus on a special interest. Courses and they may choose to range broadly across the two
disciplines or to focus on a special interest. Courses fall broadly into the following groups.

**Anthropological Theory and Institutions of Social Life**
SA 301-4 Contemporary Ethnography
SA 323-4 Symbol, Myth and Meaning
SA 332-4 The Anthropology of Childhood
SA 364-4 Urban Communities and Cultures
SA 371-4 The Environment and Society
SA 402-4 The Practice of Anthropology
SA 451-4 Issues in Anthropological Theory
SA 472-4 Anthropology and the Past

**Canadian Native Peoples and Other Minority Indigenous Peoples**
SA 386-4 Native Peoples and Public Policy
SA 388-4 Comparative Studies of Minority Indigenous Peoples
SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

**Ethnic Relations**
SA 400-4 Canadian Ethnic Minorities
Health and Society
SA 318-4 The Anthropology of Medicine
SA 319-4 Culture, Ethnicity and Aging
SA 320-4 Population and Society
SA 420-4 The Sociology of Aging

**Social Policy and Social Policy Analysis**
SA 316-4 Tourism and Social Policy
SA 320-4 Population and Society
SA 340-4 Social Issues and Social Policy Analysis
SA 371-4 The Environment and Society
SA 386-4 Native Peoples and Public Policy
SA 447-4 Selected Issues in Social Policy Analysis

**Sociological Theory and Institutions of Social Life**
SA 300-4 Canadian Social Structure
SA 304-4 Social Control
SA 322-4 Sociology of Religion
SA 325-4 Political Sociology
SA 327-4 Sociology of Knowledge
SA 333-4 Schooling and Society
SA 350-4 Classical Sociological Thought
SA 351-4 Classical Marxism Thought
SA 358-4 The Philosophy of the Social Sciences
SA 362-4 Society and the Changing Global Division of Labor
SA 416-4 Sociology of Art Forms
SA 450-4 Advanced Sociological Theory

**Third World Studies**
SA 363-4 Processes of Development and Underdevelopment
SA 392-4 Latin America
SA 463-4 Special Topics in Development Studies
Theory and methods requirements should be taken early in the upper division. Students are strongly urged to balance theory courses with methods courses over and above the required minimum.

**Anthropology Major Program**
Students must complete 32 credit hours in upper division SA courses, including the following.
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods
SA 402-4 The Practice of Anthropology
plus any two upper division A courses.

An additional 12 upper division credit hours are required, to be chosen from any SA or A course. Courses designated A are highly recommended.

**Sociology Major Program**
Students must complete 32 credit hours in upper division SA courses, including
SA 350-4 Classical Sociological Thought
one of
POL 315-4 Quantitative Methods in Political Science
SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods
SA 357-4 Survey Methods

An additional 20 upper division credit hours are required, to be chosen from any SA or S course. Courses designated S are highly recommended.

**Applied Social Research Stream**
Students wishing broader preparation in research methods may choose this special stream. See the department advisor for details.

**Joint Major Programs**

**Joint Major in Anthropology and Geography**
Please see “Joint Major in Anthropology and Geography” on page 134.

**Joint Major in Anthropology and Sociology**
Please see “Joint Major in Anthropology or Sociology, and Art and Culture Studies” on page 145.

**Joint Major in Anthropology and Sociology**
Please see “Joint Major in Anthropology or Sociology, and Art and Culture Studies” on page 145.

**Joint Major in Anthropology and Sociology**
Please see “Joint Major Programs” on page 136.

**Joint Major in Anthropology and Sociology**
**Lower Division Requirements**
Refer to the Major Programs – Lower Division Requirements for the two discipline requirement specifications.
SA 100-4 Perspectives in Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 201-4 Anthropology of Contemporary Life
SA 250-4 Introduction to Sociological Theory
SA 255-4 Introduction to Social Research
STAT 203-3 Introduction to Statistics for Social Sciences
plus one additional ‘A’ course at the 200 division

**Note:** Students with equivalent post-secondary statistics courses are exempt from STAT 203. It is strongly recommended that students take SA 255 before taking STAT 203.
When choosing lower division courses, consider the prerequisites for upper division courses.

**Upper Division Requirements**
Students must complete all of
POL 315-4 Quantitative Methods in Political Science
SA 355-4 Quantitative Methods
plus any two upper division A courses.
An additional 12 upper division credit hours are required, to be chosen from any SA or S course.

**Joint Major in Anthropology and Communication**

**Sociology, anthropology and communications overlap in many concerns:** nature, production, commodification, and politics of culture; communicative processes and social identity, class, gender, etc. This joint major is for those who share these common interests. A minimum 2.50 CGPA is required for entry and continuation in this program.

Students must fulfill lower and upper division requirements for both sociology and anthropology, as listed below.

**Lower Division Anthropology Requirements**
Students must complete all of
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 255-4 Introduction to Social Research
and one of
SA 201-4 Anthropology of Contemporary Life
SA 255-4 Introduction to Social Research

**Lower Division Sociology Requirements**
Students must complete all of
SA 100-4 Perspectives on Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 255-4 Introduction to Sociological Theory
SA 255-4 Introduction to Social Research
STAT 203-3 Introduction to Statistics for the Social Sciences

**Lower Division Communication Requirements**
Students must complete all of
CMNS 110-3 Introduction to Communication Studies
CMNS 130-3 Explorations in Mass Communication
Students must complete at least six (6) CMNS 200 division courses, including at least two of
CMNS 260-3 Empirical Communication Research Methods
CMNS 261-3 Documentary Research in Communication
CMNS 262-3 Design and Method in Qualitative Communication Research
and at least one course from each area of concentration in communication (see below).

**Media and Culture**
CMNS 220, 221, 223 or 235
Technology and Society
CMNS 210, 253

Political Economy and Policy
CMNS 230 or 240

The remaining 200 division CMNS course(s) can be chosen from any area of concentration.

A grade of C- or better is mandatory in each of the required lower division CMNS courses.

Upper Division Anthropology Requirements
Students must complete a minimum of 20 upper division credit hours in anthropology or SA courses (five courses) which must include the following.
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods

Recommended
SA 402-4 The Practice of Anthropology

Upper Division Sociology Requirements
Students must complete a minimum of 20 upper division credit hours in sociology or SA courses (five courses) which must include the following.
SA 350-4 Classical Sociological Thought
and one of
SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods

Upper Division Communication Requirements
Students must complete a minimum of 24 upper division communication credit hours. Directed study and field placement courses may not be used.

Joint Major in Sociology or Anthropology and Criminology
These disciplines have some common methods and theoretical concerns; the relationship between such variables as class, gender, ethnicity and crime; the social construction of deviance; the law as a social phenomenon; and the general social, political, and economic frameworks of society that condition the nature and perception of social problems. This program is for those who share these concerns.

Admission is contingent upon the enrolment limitation requirements of the School of Criminology. Application for admission must follow the general procedures established by the school.
A grade of 1.67 (C-) or better is required in all non-elective courses.

The department offers degrees in sociology and anthropology and a joint degree in sociology and anthropology. Students interested in a joint program in sociology or anthropology and criminology should contact both department advisors.

Anthropology Requirements
Lower Division Requirements
SA 100-4 Perspectives on Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 201-4 Anthropology of Contemporary Life
plus one
CRIM 220-3 Research Methods in Criminology
SA 255-4 Introduction to Social Research
plus one 200 division sociology/anthropology (SA) or anthropology (A) course.

Upper Division Requirements
Students must complete a minimum of 20 upper division credit hours including
both of
SA 301-4 Contemporary Ethnography
SA 356-4 Qualitative Methods
plus 12 additional upper division credit hours in sociology/anthropology (SA) or anthropology (A). SA 402 is highly recommended.

Sociology Requirements
Lower Division Requirements
For the joint major in sociology and criminology, students must complete all of
SA 100-4 Perspectives on Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 250-4 Introduction to Sociological Theory
plus one of
CRIM 220-3 Research Methods in Criminology
SA 255-4 Introduction to Social Research
plus one additional 200 division sociology/anthropology (SA) or sociology (S) course.

Upper Division Requirements
Students must complete a minimum of 20 upper division credit hours including
SA 350-4 Classical Sociological Thought
SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods (SA) or sociology (S) courses

Highly Recommended
SA 304-4 Social Control

Criminology Requirements
For either the joint major in sociology and criminology, or in anthropology and criminology, students must complete the following criminology lower division requirements with a 2.25 CGPA.

All criminology lower division requirements must be completed before application, and before formal admittance to upper division criminology courses.
CRIM 369 or 462 may not be used for credit towards this joint major.

Students who withdraw from the joint major program and pursue a criminology major only will be required to complete additional course work consistent with the requirements for a major in criminology.

Lower Division Requirements
all of
CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach
CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
CRIM 203-3 Historical Reactions to Crime and Deviance
CRIM 230-3 Criminal Law
plus all of
CRIM 101-3 Introduction to Criminology
CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior

plus one of
CRIM 220-3 Research Methods in Criminology*
SA 255-4 Introduction to Social Research*
plus one of
BUEC 232-3 Elementary Economic and Business Statistics I
PSYC 210-4 Introduction to Data Analysis in Psychology
STAT 100-3 Chance and Data Analysis
STAT 101-3 Introduction to Statistics
STAT 203-3 Introduction to Statistics for Social Sciences

*Students who take CRIM 220 must obtain, from the sociology/anthropology advisor, a waiver of the SA 255 prerequisite for SA 355 and 356 in advance of enrolling for these courses. Students who take SA 255 must obtain, from the criminology advisor, a waiver of the CRIM 220 prerequisite for CRIM 320 in advance of enrolling for this course.

Upper Division Requirements
Students must complete a minimum 20 credit hours in criminology with a C- or better including
CRIM 300-3 Current Theories and Perspectives in Criminology
CRIM 330-3 Criminal Procedure and Evidence
CRIM 332-3 Sociology of Law
CRIM 369 and 462 are not permitted.

Joint Major in Sociology or Anthropology and Latin American Development Studies

Lower Division Sociology Requirements
SA 100-4 Perspectives on Canadian Society
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 250-4 Introduction to Sociological Theory
SA 255-4 Introduction to Social Research
SA 356-4 Ethnography and Qualitative Methods

Upper Division Sociology Requirements
Students must complete 20 credit hours in sociology or SA courses, which must include
SA 350-4 Classical Sociological Thought
and one of
SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods

Lower Division Anthropology Requirements
These requirements are the same as for sociology except that SA 250 is not required. In addition, two 200 division anthropology or SA courses are required.

Upper Division Sociology Requirements
Students must complete 20 credit hours in sociology or SA courses, which must include
SA 350-4 Classical Sociological Thought
and one of
SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods

Joint Major in Anthropology and Linguistics

For requirements, see “Joint Major in Linguistics and Anthropology” on page 172.

Joint Major in Sociology or Anthropology and Women’s Studies

For requirements, see “Joint Major in Sociology or Anthropology and Women’s Studies” on page 190.

Honors and Joint Honors Programs

Sociology Honors Program
In addition to the specified lower division requirements (see “Major Programs” on page 181), students must complete 52 credit hours in upper division SA, 32 of which must be in sociology, with the remaining 20 in anthropology.
A 3.33 grade point average in all SA courses is required for admission to, and graduation from, the honors program. Also, honors students must complete SA 499.

Theory Requirements
Please see “Major Programs” on page 181. Theory requirements should be taken as early as possible in the upper divisions.
Methods Requirements
Please see “Major Programs” on page 181. Methods requirements should be taken as early as possible in the upper division program.

Note: Students are strongly urged to balance theory courses with methods courses over and above the required minimum.

Anthropology Honors Program
In addition to the lower division requirements (see “Major Programs” on page 181), students must complete 52 hours in upper division SA courses, 32 credit hours of which must be in anthropology, with the remaining 20 credit hours in sociology. A GPA of 3.33 in all SA courses is required for admission to, and graduation from, the honors program. Also, honors students must complete SA 499.

Theory Requirements
Please see “Major Programs” on page 181. Theory requirements should be taken as early as possible in the upper division program.

Methods Requirements
Please see “Major Programs” on page 181. Methods requirements should be taken as early as possible in the upper division program.

Note: Students are strongly urged to balance theory courses with methods courses over and above the required minimum.

Joint Honors in Sociology and Anthropology
In addition to the lower division requirements specified earlier (see “Major Programs” on page 181), students must complete 60 credit hours in upper division SA courses, 32 credit hours of which must be in one discipline, with the remaining 28 credit hours in the other discipline. A 3.33 GPA in all SA courses is required for admission to, and graduation from, the honors program. Honors students must complete SA 499.

Theory Requirements
Please see “Major Programs” on page 181. Theory requirements should be taken as early as possible in the upper division program.

Methods Requirements
Please see “Major Programs” on page 181. Theory requirements should be taken as early as possible in the upper division program.

Note: Students are strongly urged to balance theory courses with methods courses over and above the required minimum.

Joint Honors in Sociology or Anthropology and Canadian Studies
See “Joint Honors Program” on page 136.

Minor Programs

Anthropology Minor Program
Lower Division Requirements
Completion of 12 lower division credit hours:
SA 101-4 Introduction to Anthropology
SA 201-4 Anthropology of Contemporary Life
SA 255-4 Introduction to Social Research*
*other courses may be substituted upon the advice and with permission of the department advisor.

Note: unassigned transfer credit, (SA 000-3) cannot be used instead of SA 101 or 201.

Upper Division Requirements
Completion of 15 upper division hours to include:
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods

The balance of this requirement must include one anthropology (A) course at the 400 division.

Sociology Minor Program
Students must complete 12 lower division credit hours, of which eight must be an S designation or SA designation, and a minimum of 15 upper division credit hours, all of which must be in S or SA designation courses.

Note: those upper division courses with an A designation will not be allowed for a sociology minor.

Extended Minor Program
An extended general minor consists of lower division requirements for a major and upper division requirements for a minor. Certain other criteria may be set by individual departments and programs. A student must have their program approved by the advisor for the extended minor program.

Certificate Programs

Certificate in Ethnic and Intercultural Relations
This interdisciplinary program is for those planning to work in multicultural or cross-cultural settings. In today’s increasingly interdependent world, the need for critical understanding of ethnicity and social justice has been acknowledged by educators, community workers and other professionals. In response, the program explores causes of unequal treatment, to compare social justice issues internationally, and to develop strategies for social change.

The program is for both general students and those interested in working with human service professionals (social workers, educators, police, counsellors, personnel managers, health practitioners or civil servants) who are required to interact effectively with people from a variety of cultural and linguistic backgrounds. The goal is to foster better understanding of the nature of the multi-ethnic society in which we live and work.

Both day and evening courses are offered at the Burnaby campus and at Simon Fraser University Vancouver. Some are available through Distance Education.

Program Objectives
Program participation enables students to develop:
• critical perspectives on current debates about racism, equality and social justice
• a clearer understanding of the concept of diversity as it relates to hierarchical structuring of differences
• knowledge based on immigration, citizenship and civil rights
• skills that will prepare you for professional work or further academic study in the field.

Program Requirements
Students must successfully complete 30 credit hours comprised of 12 required hours, and the remaining chosen from two sets of specified electives. These courses, which include both lower and upper division courses, provide critical and interdisciplinary material. A minimum 2.50 GPA calculated on the designated courses for the certificate is required. Duplicate courses will be counted only once.

Core Courses
POL 481-4 Ethnic Politics and National Identity: Comparative Perspectives
SA 203-4 Violence in War and Peace
SA 349-4 Race, Immigration and the Canadian State*
SA 386-4 The Ethnography of Politics

Elective Courses
Students must complete a minimum of 10 credit hours from the following:
ASC 101-3 Introduction to Asia-Canada Studies I
CRIM 335-3 Human Rights and Civil Liberties
CRIM 311-3 Minorities and the Criminal Justice System*
HIST 326-4 The History of Native People in Canada
SA 255-4 Introduction to Social Research
SA 286-4 Aboriginal Peoples and British Columbia: Introduction
SA 319-4 Culture Ethnicity and Aging
SA 340-4 Social Issues and Social Policy Analysis
SA 361-4 Gender, Colonialism, Post-Colonialism
SA 400-4 Canadian Ethnic Minorities
WS 200-3 Women in Cross Cultural Perspective

Optional Courses
To fulfill the remaining eight hours, students choose from the following list when content is applicable to multicultural issues. Consult with the department.

CMNS 447-4 Negotiations and Dialogue as Communication
CRIM 419-3 Indigenous Peoples, Crime, and Criminal Justice
EDUC 441-4 Multicultural and Anti-racist Education
GEOG 102-3 World Problems in Geographical Perspective
GEOG 420-4 Comparative Cultural Geography
HIST 424-4 Problems in the Cultural History of Canada
POL 320-4 Canada and Latin America
SA 402-4 The Practice of Anthropology
WS 309-4 Gender and Development

*available through the Centre for Distance Education

Certificate in Family Studies
This program studies families from an interdisciplinary perspective. Students gain an understanding of psychology, sociology, gerontology and health. Students may supplement core courses with electives in relevant disciplines such as communications, education, history, and women’s studies.

Admission Requirements
In addition to normal University admission requirements, students must complete PSYC 100, 102, and SA 150 prior to formal program admission. GER0 300 is highly recommended. Students can be admitted under regular or special entry requirements.

Program Requirements
• successful completion of 30 credit hours, of which 14 are earned by completing four required core courses. The remaining 16 hours are selected from a set of three courses from which the students select one, and 12 hours of elective credit. Some have prerequisites that are not included in the certificate program.
• minimum 2.25 GPA calculated on courses applied to the certificate. Duplicate courses are counted once.
• completion of the certificate normally within five years of admission to the certificate program.

Core Courses (18 credit hours)
GERO 408-4 Families and Aging
PSYC 250-3 Introduction to Developmental Psychology
SA 231-4 Sociology of Families

and one of
KIN 110-3 Human Nutrition: Current Issues
KIN 140-3 Contemporary Health Issues
and one of
HIST 310-4 Women and the Family in Modern Europe

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SA 331-4 Politics of the Family  
SA 332-4 Anthropology of Childhood  
*If students choose more than one of these courses, they may be applied to their elective courses.  

**Elective Courses (12 credit hours)**  
Students must complete 12 credit hours from:  
CMNS 320-4 Children, Media and Culture  
CRIM 210-3 Law, Youth and Young Offenders  
HIST 329-4 Canadian Family History  
PSYC 355-3 Adolescent Development  
PSYC 357-3 Adulthood and Aging  
SA 319-4 Culture, Ethnicity and Aging  
SA 335-4 Gender Relations and Social Issues  
SA 340-4 Social Issues and Social Policy Analysis  
SA 496-4 Directed Readings in Anthropology (or SA 497)  
WS 200-3 Women in Cross-Cultural Perspective  
WS 203-3 Female Roles in Contemporary Society  
To develop research skills, students may select the following as electives.  
PSYC 210-4 Introduction to Data Analysis in Psychology  
SA 255-4 Introduction to Social Research  

**Transfer Credit**  
Up to 14 credit hours assigned to specific courses may be transferred to the certificate, subject to University transfer credit regulations and the co-ordinator’s approval. Normally, required upper division core courses will be completed at Simon Fraser University.  

**Post Baccalaureate Diploma Program**  
**Post Baccalaureate Diploma in Social Policy Issues**  
This program, for those with a bachelor’s degree, may be completed through a combination of courses offered through distance education, at the Burnaby and the downtown campuses. The program applies recent developments in social theory and research methods to the investigation of social programs and social policy issues. Courses examine substantive social policy issues. The program provides critical perspectives to understand processes by which social problems are defined, understood, and acted upon.  

For the program’s general regulations, see “Post Baccalaureate Diploma Program” on page 7.  

**Program Requirements**  
Students must successfully complete an approved program comprised of 30 credit hours of third and fourth year courses. At least 16 are to be taken from the set of core courses described below.  

**Core Courses**  
Students must complete at least four of the following courses, one of which must be SA 340,  
SA 316-4 Tourism and Social Policy  
SA 319-4 Culture, Ethnicity, and Aging  
SA 320-4 Population and Society  
SA 333-4 Schooling and Society  
SA 335-4 Gender Relations and Social Issues  
SA 340-4 Social Issues and Social Policy Analysis  
SA 363-4 Processes of Development and Underdevelopment  
SA 386-4 The Ethnography of Politics  
SA 420-4 Sociology of Aging  

**Optional Courses**  
An additional four courses from the following list would complete the requirements for the program.  
POL 321-4 The Canadian Federal System  
POL 352-4 Canadian Local and Urban Government and Politics  
POL 451-4 Public Policy Analysis  
SA 300-4 Canadian Social Structure  
SA 304-4 Social Control  
SA 321-4 Social Movements  
SA 325-4 Political Sociology  
SA 362-4 Sociality and the Changing Global Division of Labor  
SA 371-4 Environment and Society  
SA 400-4 Canadian Ethnic Minorities  
SA 402-4 The Practice of Anthropology  
SA 463-4 Special Topics in Development Studies  
To fulfill the optional course requirement, students may instead take additional core courses, or upon the program steering committee’s recommendation, select a course not included among listed options, but with content appropriate to the program.  
Acceptance of general Simon Fraser University admission does not automatically guarantee admission to this program. Students must apply for entry directly to the Department of Sociology and Anthropology.  

**Co-operative Education**  
This program provides practical social sciences experience and entails planned study terms and employment in an area of the student’s choice.  

**Requirements**  
To be admitted, students must have completed 29 credit hours with a minimum 2.75 CGPA.  
Prior to admission, students must complete all of SA 101-4 Introduction to Anthropology  
SA 150-4 Introduction to Sociology  
SA 255-4 Introduction to Social Research and one of  
SA 201-4 Anthropology of Contemporary Life  
SA 250-4 Introduction to Sociological Theory  
plus one additional 200 division SA course.  
College transfer students must complete at least 15 Simon Fraser University credit hours for admission eligibility, and must satisfy the requirements above or equivalents. College transfer students who participated in co-op programs elsewhere may be credited with term(s) already taken but applicability depends on the evaluation of the Department of Sociology and Anthropology.  
Work terms are made through the Faculty of Arts and Social Sciences and department co-op co-ordinators.  
For program continuation, a minimum 2.75 cumulative GPA is required. See “Co-operative Education” on page 237 or contact the department.  

**Statistics Program**  
TLX10545 Shrum Science Centre, 778.782.3803 Tel,  
778.782.4368 Fax, www.stat.sfu.ca, stat@sfu.ca  
Chair of Statistics and Actuarial Science  
R.A. Lockhart BSc (Br Col), MA, PhD (Calif)  
Professor Emeritus  
M.A. Stephens BSc (Brst), AM (Harv), PhD (Tor)  
Professor Emeritus  

Associated Faculty within Department of Statistics and Actuarial Science  
R. Altman  
D. Bingham  
D.A. Campbell  
J. Cao  
C.B. Dean  
J. Graham  
J. Hu  
R.A. Lockhart  
T.M. Loughin  
Y. Lu  
B. McNeny  
G. Parker  
R.D. Routledge  
C. Schwartz  
R.R. Sitter  
T.B. Swartz  
B. Tang  
S. Thompson  
C. Tsai  
K.L. Weldon  

Senior Lecturer  
R. Insley BSc, MSc (Br Col)  
The program maintains a committee of advisors whose office hours are available at the Department of Statistics and Actuarial Sciences general office.  
Students pursuing a major should seek planning advice early in their academic career.  
A program within the Faculty of Arts and Social Sciences leading to a bachelor of arts with a major or honors in statistics is offered. Students interested in a bachelor of science degree in statistics should see “Department of Statistics and Actuarial Science” on page 232 in the Faculty of Science section.  
The following program trains students, not only in the analysis of large data sets, but also in the design and analysis of scientific experiments and sample surveys. These techniques are applied in a broad range of fields. To appreciate their application, students gain advanced training in an area of potential application. To this end, major or honors students complete a minor in a field other than statistics. There are no other restrictions on the selection of a minor. Students are encouraged to discuss the selection of a minor with an advisor early in their program.  
The following related programs may also be of interest: mathematics and computing science (page 226), management and systems science (page 220).  

**Admission Requirements**  
For major or honors program admission, a student must normally have an average grade of B- in at least two approved Simon Fraser University STAT courses. Visit www.stat.sfu.ca/programmes/statistics/admission for policy implementation details.  

**Other Requirements**  
**Faculty of Arts and Social Sciences Requirements**  
Students planning a bachelor of arts with a statistics major or honors must satisfy the Faculty of Arts and Social Sciences requirements.  

**Writing, Quantitative, and Breadth Requirements**  
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.  

**Courses for Further Credit**  
No student may take, for further credit, any course offered by the Department of Statistics and Actuarial Science which is a prerequisite for a course that the student has already completed with a grade of C- or higher without permission of the department.  

**Computing Recommendation**  
Some experience with a high level programming language is recommended by the beginning of the second year.  

**Non-specialist STAT Courses**  
The following courses are intended to be particularly accessible to students who are not specializing in statistics: STAT 100, 101, 201, 203, 302, 403.
“Statistics STAT” on page 458 for course descriptions and associated course information.

Open Workshops
Some introductory and service courses are organized through the department’s open workshops. In addition to regularly scheduled lectures, students enrolled in STAT 100, 101, 102, 201, 203, 270 and 302 are encouraged to come to the workshops for assistance anytime during posted hours. At the workshop, students meet with the co-ordinator, teaching assistants and students, and work together to understand mathematics in a friendly and helpful environment. The statistics workshop is held in K9510 Shrum Science Centre (inside K9510).

Beginning Level Requirements in Statistics
Students who are considering to enroll in a statistics course, and do not have BC high school mathematics 11 (or equivalent), must see the basic math workshop co-ordinator. These students may take the non-credit basic algebra course that is offered by the Department of Mathematics.

Those who are unsure of their level of preparation are strongly encouraged to take the free math assessment test at the basic math workshop located in KS050 or at Simon Fraser University Vancouver. Be sure to discuss the test results with the lab instructor in the workshop, or his/her designate.

Prerequisite Grade Requirement
Students must have a grade of C- or better in prerequisites for STAT courses offered by the Department of Statistics and Actuarial Science.

GPA Required for Continuation
To continue in the Statistics Program, Students must maintain at least a 2.25 grade point average in MATH, STAT or ACMA courses.

Credit for Statistics Courses
Credit for STAT courses depends on the order in which the courses are taken. There are three kinds of courses:

- introductory course STAT 100
- service courses STAT 101, 201, 203, 301, 302, 403
- mainstream courses STAT 270, 285, 300, 330, 350, 380, 400, 410, 430, 450, 460

Once a service or mainstream course is completed, credit may not be obtained for any service course. An exception is that both STAT 302 and 403 may be taken for credit after taking STAT 270.

Major Program
A major in statistics requires 120 credit hours, of which at least 65 must be within the Faculty of Arts and Social Sciences, and the Department of Statistics and Actuarial Science. Please see "Bachelor of Arts Degree" on page 130 for general regulations, breadth requirements, upper division credit, etc.

Students must obtain credit for the following.

Lower Division Requirements in Mathematics

Students must complete one of

- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- MATH 154-3 Calculus I for the Biological Sciences
- MATH 157-3 Calculus for the Social Sciences I

plus one of

- MATH 152-3 Calculus II
- MATH 155-3 Calculus II for the Biological Sciences
- MATH 158-3 Calculus for the Social Sciences II

plus both of

- MATH 223-3 Elementary Linear Algebra
- MATH 251-3 Calculus II

Statistics

Students must complete both of

- STAT 270-3 Introduction to Probability and Statistics
- STAT 285-3 Intermediate Probability and Statistics

Computing Science

Students must complete one of

- CMPT 125-3 Introduction to Computing Science and Programming I
- CMPT 126-3 Introduction to Computer Science and Programming

Upper Division Requirements

Probability and Statistics

Students must complete all of

- STAT 330-3 Introduction to Statistical Inference
- STAT 350-3 Linear Models in Applied Statistics
- STAT 402-3 Generalized Linear and Nonlinear Modelling
- STAT 410-3 Statistical Analysis of Sample Surveys
- STAT 430-3 Statistical Design and Analysis of Experiments
- STAT 450-3 Statistical Theory

plus four additional upper division ACMA, MACM, MATH or STAT courses excluding STAT 301, 302 and 403. Students should consult a department advisor before selecting these courses. It is recommended that these four additional upper division courses be selected from STAT 305, 380, 400, 460, 490, 495 and MACM 316. Honors students may not overlap these four courses with those used to satisfy the Additional Mathematics Requirements and the Additional Statistics Requirements as shown in the Honors Program below.

Minor Program Requirements

Students are required to complete a minor in a discipline other than statistics. The certificate in actuarial mathematics may fulfill this requirement.

Honors Program

This bachelor of arts program requires 132 credit hours, of which at least 65 must be within the Faculty of Arts and Social Sciences and Department of Statistics and Actuarial Science. See “Bachelor of Arts Degree” on page 130 for general regulations, breadth requirements, upper division credit and other requirements. In addition to the requirements for a major, candidates must obtain credit for the following.

Additional Mathematics Requirements

Students must complete all of

- MATH 242-3 Introduction to Analysis
- MATH 320-3 Advanced Calculus of One Variable
- MATH 322-3 Complex Variables

plus one of

- MATH 332-3 Introduction to Applied Algebraic Systems
- MATH 339-3 Groups and Symmetry
- MATH 438-3 Linear Algebra

Additional Statistics Requirements

Students must complete both of

- STAT 380-3 Introduction to Stochastic Processes
- STAT 460-3 Decision Analysis and Bayesian Inference

Minor Program

Statistics minor program requirements are listed in Department of Statistics and Actuarial Science (page 232) in the Faculty of Science section.

Extended Minor Program

According to faculty regulations, an extended minor comprises the lower division requirements for a major plus the upper division requirements for a minor. At least seven upper division credit hours counted toward this requirement must be taken at Simon Fraser University.

Co-operative Education

This program integrates work experience with academic study. See “Co-operative Education” on page 237 for information. Consult with the science and environment co-op co-ordinator Mr. E. Simons at esimons@sfu.ca.

Centre for Sustainable Community Development

2608 West Mall Complex, 778.782.5849 Tel, 778.782.5473 Fax, www.sfu.ca/cscd

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Sustainable Community Development (SCD) aims to integrate economic, social and environment objectives in community development. Sustainable community development is based on a consideration of the relationship between economic factors and other community elements such as housing, education, the natural environment, health accessibility and the arts. SCD has emerged as a compelling alternative to conventional approaches to development, a participatory, holistic and inclusive process that leads to positive, concrete changes in communities by creating employment, reducing poverty, restoring the health of the natural environment, stabilizing local economies, and increasing community control.

The Centre for Sustainable Community Development (CSCD), formerly the Community Economic Development Centre, was founded in 1989. The centre’s mission is to support the sustainable development of communities through education, research, and community mobilization. It provides research, training, and advisory services throughout BC and Canada, as well as internationally. The CSCD an undergraduate certificate and post baccalaureate diploma (also available through distance education), graduate support, and a non-credit professional program.

Certificate

This program offers basic accreditation in sustainable community development and is for those who seek an holistic, active, practical credential with an undergraduate degree. Students may take this program with or without enrollment in a bachelor’s degree program. General certificate regulations apply. Courses taken for this certificate may also apply toward major or minor program requirements or toward a bachelor’s degree under normal regulations. This program may be taken by distance education.

Admission Requirements

General undergraduate admission to the university and formal application for program approval with the
Centre for SCD. Students must normally complete 30 credit hours before applying for this program.

New program application deadlines: May 1 for fall term, October 1 for spring term, February 1 for summer term, Intercession and summer session.

Program Requirements

Students must complete a minimum of 19 credit hours of required courses and approved elective courses, attain at least a C+ grade in SCD 201 and SCD 301 for program continuance, and must maintain at least a 2.5 GPA in all SCD courses to obtain the certificate. Fifteen credit hours are earned by completed four core courses:
- SCD 201-3 Introduction to Sustainable Community Development
- SCD 301-4 Sustainable Community Development Theory and Practice
- SCD 401-4 Social Enterprise for Sustainable Community Development
- SCD 403-4 Leadership in Sustainable Community Development

The remaining minimum of four credit hours are selected from a list of multidisciplinary courses approved by the Centre or other electives approved by the director. These include SCD 410 Special Topics, offered with a changing SCD related topic annually. Under circumstances where fieldwork or work experience is not available as part of a student’s major, minor or co-op program, the student may apply to take SCD 404 Project as their elective. Note that a choice of a three credit elective means that more than one elective will be required to fulfill the minimum credit hours for completion of the certificate. Electives may be either upper or lower division courses, but must be approved by the CSCD. Courses in other departments may have prerequisites not included in this certificate program.

Transfer Credit

Transfer credit for work done at other institutions, before or after program admission, may be approved toward program fulfill requirements provided they meet centre’s requirements for community economic development relevance and that at least half of the total credit hour requirements are taken at Simon Fraser University. All other requirements for transfer credit under general undergraduate regulations apply.

Limits

Those who complete the undergraduate certificate cannot enrol in the post baccalaureate diploma program (PBD). Those who have taken the CED or sustainable community development (SCD) PBD may not enrol in this certificate. Those who have taken CED 400 or CED 402 may not take SCD 201 or SCD 301 for credit toward the certificate.

More information is available at www.sfu.ca/cscd. See also “Centre for Sustainable Community Development” on page 186.

Post Baccalaureate Diploma

This program is for those with an undergraduate degree or equivalent. The diploma is applicable to a wide range of occupational, professional and academic fields. By combining courses from several disciplines with a specially designed core of study and opportunities for guided practice, the program provides unique perspectives on sustainable community development.

New application deadlines: May 1 for fall term, October 1 for spring term, February 1 for summer term, Intercession and summer session.

For information about post baccalaureate diploma program general regulations, see “Post Baccalaureate Diploma Program” on page 7.

Required Courses

Students must complete 30 upper division credit hours, including 16 hours in the following courses.
- SCD 301-4 Sustainable Community Development Theory and Practice
- SCD 401-4 Social Enterprise for Sustainable Community Development
- SCD 403-4 Leadership in Sustainable Community Development
- SCD 404-4 Project in Sustainable Community Development

In addition to these required courses, students must complete at least 14 credit hours in elective courses.

Elective Courses

Select electives from the SCD electives (SCD 410, 412) and from a variety of departments, in consultation with the Centre for SCD’s academic supervisor. A list of pre-approved electives is available but students may also propose courses for that meet the following requirements:

- the proposed course must be an upper division course (300-400 division) or higher;
- the elective proposal must be submitted and approved, in writing, before enrolling and include the course description. Students should complete electives early in the enrollment period.
- the proposed course must meet the CSCD’s content requirements for being thematically related to SCD or applicable skills for SCD field work. It must be sufficiently related by topic to SCD (e.g. underdevelopment, regional planning, public planning processes) and/or provide research and other skills relevant to SCD practice (e.g. business management, organizational behavior, fieldwork methodologies, qualitative and quantitative analysis). Determination of relevance and applicability will be made by the CSCD academic supervisor or their designee.
- a proposed directed studies course from another department requires a detailed study plan to be approved in advance by the CSCD academic supervisor and the chosen faculty supervisor. The project’s final report must be submitted to the centre as well as to the named faculty member.
- students are responsible for prerequisite or other clearances to gain course entry. Many departments waive introductory courses for those with extensive experience. However, other Simon Fraser University departments give course enrollment priority to their own students and will not necessarily permit SCD students to enroll. Check all Calendar entries and consult both department and CSCD advisors before enrolling.

Other restrictions may apply.

Transfer credit for work done at other institutions, before or after admission to the program, may be approved provided it meets SCD requirements for relevance to community economic development and provided that at least 18 of the total credit hour requirements are taken at Simon Fraser University. All other requirements for transfer credit under general post baccalaureate programs regulations apply.

Applications for transfer credit must be initiated at the time of application for admission to Simon Fraser University by requesting a Letter of Permission from the admissions office. A GPA of 2.5 in all required and elective courses to be credited toward the diploma must be maintained for continuance in the program.

More information on the centre and its programs is provided in “Centre for Sustainable Community Development” on page 186 for information about research activities.

Department of Women's Studies

5102A Academic Quadrangle, 778.782.3333 Tel, 778.782.5518 Fax, www.sfu.ca/womens-studies

Chair
M.L. Stewart BA (Calg), MA, PhD (Col)

Professors Emeriti
M. Kimball BA (Macalester), PhD (Mich)***
A. Lebowitz BA (New Rochelle), MA (Wis)
S. Wendell BA (NY State), PhD (Br Col)

Ruth Wynn Woodward Endowed Chair
K. Braid BA (MAll), MA (S Fraser), MFA (Br Col)

Professors
M. Griffin Cohen BA (Iowa Wesleyan), MA (NY State), PhD (York, Can)**
M.L. Stewart BA (Calg), MA, PhD (Col)

Associate Professors
J. Levitin BA, MA (Wash), PhD (NY State)*
J. Marchbank BA (Strath), MA (Central London), PhD (Strath)
C.K. Patton BA (Appalachian State), MTS (Harvard), PhD (Mass), Canada Research Chair***
H. Zaman BA (Dhaka), MA, PhD (Manti)

Assistant Professors
L. Campbell MBa (MCi), MA (Tor), PhD (Ou)
H. Leung BA (Ox), MA, PhD (Wisc)
M. MacDonald BEd (Ou), BSc (MAll), PhD (WOnt)

Associate Members
M. Bubber, Library
B. Burch, Criminology
P. Dossa, Sociology and Anthropology
O. Hankivsky, Public Policy
J. Matsumura, History
A.T. McLaren, Sociology and Anthropology
K. Mezei, English
M.H. Morrow, Health Sciences

Advisor
Ms. R. Rogers BA (S Fraser), 5103 Academic Quadrangle, 778.782.3593, wsd@sfu.ca

Joint appointment with contemporary arts
Joint appointment with political science
Joint appointment with sociology and anthropology

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information. For the Faculty’s requirements, see “Writing, Quantitative, and Breadth Requirements” on page 130.

Major Program

Lower Division Requirements

Students must complete 12 lower division credit hours in women’s studies including both of
- WS 101-3 Introduction to Women’s Issues in Canada
- WS 102-3 Introduction to Western Feminisms

and one of
- WS 207-3 Introduction to Feminist Theory
- WS 208-3 Researching Women’s Issues: How Do We Do What We Do?”
Upper Division Requirements
Students must complete 32 upper division credit hours in women's studies. Students may substitute up to eight hours of upper division credit offered by other departments and approved by women's studies.

Minor in Gender Studies
This minor, which may be taken with any major program, offers opportunities to integrate understanding of gender relations in society and culture.

Students must complete 24 credit hours comprising nine lower division and 15 upper division credit hours, with one lower division core course (GDST 200) required of all minors. For the remaining required credit hours needed to complete the minor, students can apply credit hours from regularly offered courses listed below, or from a list of designated courses that is posted in the women's studies department.

It is the student's responsibility to ensure completion of prerequisite and other department requirements before choosing elective courses.

Students planning a minor in gender studies should consult with the women's studies advisor about course selection at their earliest opportunity.

Lower Division Requirements
Students must complete GDST 200-3 Thinking About Gender plus two of CRIM 213-3 Introduction to Women and Criminal Justice CRIM 231-3 Introduction to the Judicial Process SA 100-4 Perspectives on Canadian Society SA 286-4 Aboriginal Peoples and British Columbia: Introduction

Upper Division Requirements
Students must complete 15 upper division credit hours selected from the following list and a list of designated courses that is posted in the women's studies department.

If in doubt about your eligibility to enroll in a particular upper division course, contact the undergraduate advisor in the appropriate department well in advance of any attempt to enroll.

CMNS 455-4 Women and New Information Technologies CRIM 333-3 Women, Law and the State CRIM 432-3 Gender in the Courts and the Legal System FPA 313-5 Arts, Audience, Patronage, Institutions GEOG 387-4 Geography and Gender HIST 411-4 Class and Gender in European History HIST 425-4 Gender and History HIST 454-4 Gender and Sexuality in US History SA 318-4 The Anthropology of Medicine SA 331-4 Politics of the Family SA 335-4 Gender Relations and Social Issues SA 435-4 Gender, Colonialism and Post-Colonialism SA 486-4 Aboriginal Peoples and British Columbia WS 309-4 Gender and Development WS 314-4 Race, Class and Gender Relations WS 323-4 Latin American Women in Literature and Society

Minor in Women Studies
A women's studies minor may be taken with any major or honors bachelor's degree, or with a bachelor of general studies. The program offers students the maximum opportunity to integrate their understanding of the role of women in their society and culture.

Lower Division Requirements
Students must complete nine lower division credit hours in women's studies including WS 101 and 102 or approved equivalents.

Upper Division Requirements
Students must complete 16 upper division credit hours in women's studies.

Those pursuing a minor normally must fulfill lower division requirements before enrolling in 400 division courses, except with permission of the department.

Additional courses in various departments are designated for inclusion in the minor; a list is available from the department. Other courses which may have high women's studies content will be considered for credit toward the women's studies minor upon application by the student. Only five credit hours of designated courses will count toward the minor. Candidates for a history honors or major may count either or both of WS 201 and 202 toward the 18 lower division history credit hours that are required.

Extended Minor Program
An extended minor consists of the lower division major requirements and the upper division minor requirements in a subject area. See "Extended Minor Program" on page 131 for further details.

Joint Major in Criminology and Women's Studies
Advisors Ms. M. McIroy, School of Criminology, 2644 Diamond Building, 778.782.3845 Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 778.782.3593

Program Requirements
Interested students should contact advisors in both the School of Criminology and the Department of Women's Studies.

To be admitted, students must satisfy admission requirements for both departments and should refer to those Calendar sections. The School of Criminology must approve the student's admission before the student will be approved by the Department of Women's Studies.

To continue in this program, students must maintain a cumulative GPA of 2.25 and cannot enroll in upper division CRIM courses with a CGPA of less than that. However, a student whose CGPA is between 2.00 and 2.25 may be eligible to apply for admission to the Department of Women's Studies major program.

Lower Division Requirements
Criminology
All criminology lower division requirements must be completed with a cumulative GPA of not less than 2.25 before applying to the school for program acceptance, and before admittance is granted to undertake the upper division criminology courses. A C- grade or better is required in all required courses.

Students must complete a minimum of 60 credit hours including all of CRIM 101-3 Introduction to Criminology CRIM 103-3 Psychological Explanations of Criminal and Deviant Behaviour CRIM 104-3 Sociological Explanations of Criminal and Deviant Behaviour CRIM 131-3 Introduction to the Criminal Justice System — A Total System Approach CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective

CRIM 213-3 Introduction to Women and Criminal Justice
CRIM 220-3 Research Methods in Criminology CRIM 230-3 Criminal Law SA 150-4 Introduction to Sociology plus one of PHIL 001-3 Critical Thinking PHIL 100-3 Knowledge and Reality PHIL 110-3 Introduction to Logic and Reasoning PHIL 120-3 Introduction to Moral Philosophy PHIL 150-3 History of Philosophy I PHIL 151-3 History of Philosophy II PHIL 220-3 Introduction to Social and Political Philosophy PHIL 244-3 Introduction to the Philosophy of Natural and Social Science PHIL 280-3 Introduction to Existentialism plus one of POL 100-3 Introduction to Politics and Government POL 151-3 The Administration of Justice plus both of PSYC 100-3 Introduction to Psychology I PSYC 102-3 Introduction to Psychology II plus one of STAT 100-3 Chance and Data Analysis STAT 101-3 Introduction to Statistics STAT 203-3 Introduction to Statistics for Social Sciences

Women's Studies
Students must complete 15 lower division credit hours in women's studies including both of WS 101-3 Introduction to Women's Issues in Canada WS 102-3 Introduction to Western Feminisms and one of WS 207-3 Introduction to Feminist Theory WS 208-3 Feminist Research Methods

Upper Division Requirements
Criminology
Students must complete a minimum of 25 upper division credit hours in criminology with a minimum CGPA of 2.25 including all of CRIM 300-3 Current Theories and Perspectives in Criminology CRIM 320-5 Quantitative Research Methods in Criminology CRIM 330-3 Criminal Procedure and Evidence CRIM 333-3 Women, Law and the State CRIM 432-3 Gender in the Courts and the Legal Profession

Note: Students in this joint major program are not permitted to complete CRIM 369 nor 462.

The remaining required credit hours may be selected at the student's discretion. Faculty of Arts and Social Sciences breadth requirements must be completed so general electives should be considered for that purpose.

Women's Studies
Students must complete a minimum of 20 upper division credit hours in Women's Studies.

The special topics course WS 303-4 is recommended when offered as Women and the Law.

Exceptionally and only with the permission of the department, one course of designated women's studies credit offered by another department may be substituted for one course.

Joint Major in English and Women's Studies
Advisors Ms. B. Thorburn, Department of English, 6133 Academic Quadrangle, 778.782.4835

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Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 778.782.3593

This inter-departmental program is for those interested in exploring various relationships between the study of English literature and women's studies. Interested students must plan their program in consultation with both department advisors, and should consult Guidelines for Course Selection available from each department.

Lower Division Requirements

English Requirements
Students must complete the lower division requirements of the English major program.

Women's Studies Requirements
Students must complete 15 lower division credit hours in women's studies including both of WS 101-3 Introduction to Women's Issues in Canada and WS 102-3 Introduction to Western Feminisms and one of WS 207-3 Introduction to Feminist Theory and WS 208-3 Feminist Research Methods

Upper Division Requirements

English Requirements
Students must complete 20 upper division English credit hours. One course must come from within the group of ENGL 300, 304, 306, 310, 311, 313, 320, and 322; and one from within the group of ENGL 354, 357, and 359. Four credit hours must be at the 400 division, excluding Directed Studies courses (ENGL 441, 442, 443 and 444).

Women's Studies Requirements
Students must complete 20 upper division credit hours in women's studies including two of WS 304-4 Women and Religion, WS 305-4 Conceiving Creativity, WS 306-4 Women's Autobiographies, Memoirs and Journals, and WS 313-4 Women and the Environment. The remaining credit hours are chosen from 300 and 400 division WS courses. Exceptionally and only with department permission, a maximum of one course of designated women's studies credit offered by another department may substitute for one WS course. The remaining required upper division hours are at the student's discretion.

Joint Major in History and Women's Studies
Advisors
Mrs. T. Wright BA (S Fraser), Department of History, 6026 Academic Quadrangle, 778.782.4429
Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 778.782.3593

This is an inter-department program for those who are interested in exploring the relationship between history and women's studies. Interested students must plan their program in consultation with the advisors in each department.

Lower Division Requirements

Women's Studies
Students must complete 15 lower division credit hours in women's studies including all of WS 101-3 Introduction to Women's Issues in Canada, WS 102-3 Introduction to Western Feminisms, WS 201-3 Colonizing Women: Canadian Women in Historical Perspective, 1600-1870s, WS 202-3 Modernizing Women: Canadian Women in Historical Perspective, 1870s-1970s and one of WS 207-3 Introduction to Feminist Theory and WS 208-3 Feminist Research Methods.

Joint Major in Political Science and Women's Studies
For requirements, see “Joint Major in Political Science and Women's Studies” on page 179.

Joint Major in Women's Studies and Psychology
Advisors
Ms. T. Anbinder, Department of Psychology, 5252 Robert C. Brown Hall, 778.782.3359
Ms. B. Davino, Department of Psychology, 5249 Robert C. Brown Hall, 778.782.4840
Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 778.782.3593

Students are encouraged to consult advisors from both departments. This inter-departmental program explores relationships between psychology and women's studies. Joint major students (or prospective students) must plan their program in consultation with department advisors.

Lower Division Requirements

Psychology
To be admitted to the major program, students must obtain a final course grade of C (2.0) or better in each of the following courses.

PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II
PSYC 201-4 Introduction to Research Methods in Psychology
PSYC 207-3 Introduction to the History of Psychology
PSYC 210-4 Introduction to Data Analysis in Psychology

Note: the above requirement applies to courses transferred from other institutions as well as to courses taken at Simon Fraser University.

Students must also complete two of PSYC 211-3 Introduction to Cognitive Psychology, PSYC 241-3 Introduction to Abnormal Psychology, PSYC 250-4 Introduction to Developmental Psychology, PSYC 260-3 Introduction to Social Psychology, PSYC 268-3 Introduction to Law and Psychology, PSYC 270-3 Introduction to Theories of Personality, PSYC 280-3 Introduction to Biological Psychology.

Women's Studies
Students must complete 15 lower division credit hours in women's studies including both of WS 101-3 Introduction to Women's Issues in Canada and WS 102-3 Introduction to Western Feminisms and one of WS 207-3 Introduction to Feminist Theory and WS 208-3 Feminist Research Methods.

Upper Division Requirements

Women's Studies
Students must complete 24 credit hours of 300 and 400 division history courses, of which 12 hours must be in 400 division courses. Students must take at least two from any two groups, and at least one from the remaining group. For a description of the groups, see “Lower Division Requirements” on page 164.

Humanities
Students must complete 15 credit hours including HUM 101-3 Introduction to the Humanities and two of HUM 201-3 Great Texts in the Humanities I, HUM 202-3 Great Texts in the Humanities II, HUM 203-3 Great Texts in the Humanities III, and two further humanities courses at the lower division.

Upper Division Requirements

Women's Studies
Students must complete 20 upper division credit hours in women's studies.

Humanities
Twenty-two credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar. The following are recommended to fulfil this requirement.

HUM 320-4 The Humanities and Philosophy
HUM 321-4 The Humanities and Critical Thinking
HUM 325-4 The Humanities and the Natural World

Joint Major in Humanities and Women's Studies
Advisors
Ms. C. Prisland, Department of Humanities, 5114 Academic Quadrangle, 778.782.4094
Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 778.782.3593

This inter-department program is for those interested in exploring relationships between humanities and women's studies. Students must plan their program in consultation with advisors in each department.

Lower Division Requirements

Women's Studies
Students must complete 15 lower division credit hours in women's studies including both of WS 101-3 Introduction to Women's Issues in Canada and WS 102-3 Introduction to Western Feminisms and one of WS 207-3 Introduction to Feminist Theory and WS 208-3 Feminist Research Methods.

Upper Division Requirements

Women's Studies
Students must complete 20 upper division credit hours in women's studies.
Joint Major in Sociology or Anthropology and Women's Studies

The Departments of Sociology and Anthropology, and Women's Studies have common interests in women's issues and social sciences teaching and research. This joint major is for those who share these interests.

Lower Division Requirements

Sociology
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 255-4 Introduction to Social Research

Anthropology
SA 231 is highly recommended.

Women's Studies
Students must complete 15 lower division credit hours in women's studies including all of:
WS 101-3 Introduction to Women's Issues in Canada
WS 102-3 Introduction to Western Feminisms
WS 200-3 Women in Cross-Cultural Perspective
WS 207-3 Introduction to Feminist Theory

Upper Division Requirements

Sociology
SA 360-4 Classical Sociological Thought
SA 365-4 Quantitative Methods

Anthropology
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods

Women's Studies
Students must complete an additional 12 credit hours of upper division SA credit.

Major Program

This program consists of courses in world literature (WL), history and languages. Students are encouraged to complete 18 lower division WL credit hours and three HIST credit hours before proceeding to upper division world literature courses. (HIST 130 is highly recommended.) Students also complete nine credit hours of language study, plus one additional three credit hour upper division course in world literature.

Upper Division Requirements

Students complete a minimum of 31 upper division WL credit hours including:
WL 300-4 How Theory Travels
and any of:
WL 301-4 Imperial Cultures
WL 302-4 Post-Imperial Cultures
WL 303-4 Global Culture and its Others
WL 304-4 Exiles and Emigres
WL 305-4 Sages and Poets

Women's Literature

This program, intended for those who wish to study world literature beyond the major program's course work, requires the study of literature in a language other than English. It also requires honors seminars in which students undertake concentrated research and writing on a topic of their choice, with approval from the program.

To apply for program entry, students complete the same lower division requirements as the major program, the language requirements, and 12 upper division credit hours including WL 300. Applicants must have a minimum 3.0 grade point average (GPA). To complete the program, a minimum of 60 upper division credit hours are required, with a minimum of 50 in world literature, and a 3.0 GPA.

Co-operative Education

This program is for qualified students to acquire practical experience in women’s studies. For admission, students must have completed 30 credit hours with a 3.0 CGPA and have completed WS 101, 102, and two 200 division WS courses. Transfer students must complete at least 15 Simon Fraser University credit hours.

For details, see “Co-operative Education” on page 237. Arrangements for work terms are made through the Faculty of Arts and Social Sciences co-op co-ordinator, who should be consulted at least one term in advance.

World Literature Program

Simon Fraser University, Galleria 5, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7609 Tel, www.students.surrey.sfu.ca/worldliterature

Acting Director
H. Dawkins BFA (Nova Scotia Art & Des), MA, PhD (Leeds)

Assistant Professor
S. Colby BA, MA, (Vic, BC), PhD (Sus)
P.L. Horta BA, MA (Br Col), MA (Ou), PhD (Tor)

Advisor
Mr. L. Thong BA (S Fraser), 778-782-7593 Tel, worldlit-advisor@sfu.ca

This bachelor of arts program focuses on writing from around the world — whether this is in the form of novels, essays, poetry, or prose, and whether the writing is traditional or experimental. The texts of world literature are those that have circulated outside their culture of origin, gaining new meanings and new relevance in other languages, nations, and traditions.

The study of world literature raises vital questions about cross-cultural understanding, the practice of translation as a creative and cultural enterprise, literature's role in history and society, and the nature of literature itself. Students will study historical, cultural, and theoretical approaches as well as the changing meanings of literature in translation.

The major, minor, and honors programs examine literature in a comparative way, emphasizing periods of cross-cultural contact and exchange.

The program’s language of instruction is English. The major and honors programs include language courses. Students are encouraged to study abroad.

Honors Program

This program, intended for those who wish to study world literature beyond the major program's course work, requires the study of literature in a language other than English. It also requires honors seminars in which students undertake concentrated research and writing on a topic of their choice, with approval from the program.

To apply for program entry, students complete the same lower division requirements as the major program, the language requirements, and 12 upper division credit hours including WL 300. Applicants must have a minimum 3.0 grade point average (GPA). To complete the program, a minimum of 60 upper division credit hours are required, with a minimum of 50 in world literature, and a 3.0 GPA.

Language Requirements

In addition to the major program's nine credit hours of language study, honors students also complete a minimum of three credit hours of literature in a language other than English. This requirement may be fulfilled by completing a WL directed reading course (WL 450) or by completing an upper division course in another Simon Fraser University department. With prior approval, this requirement may be met by completing an upper division course at another university.
Upper Division Requirements
Students complete 50 upper division WL credit hours by taking the same courses as the major program, excluding WL 450, (see above) plus the following.
WL 450-4 Directed Readings in Language and Literature
WL 480-4 Research Seminar for Honors Essay
WL 490-4 Honors Essay

Relevant Topic Courses
With prior approval, students may complete a maximum of 12 upper division credit hours of relevant topic courses from outside the World Literature Program by submitting the appropriate course description to the world literature advisor. See “Relevant Topic Courses” on page 190 (above) for a list of pre-approved courses.

Study Abroad
Students are encouraged to study abroad. See “Study Abroad” on page 190 (above).

Minor Program
Students complete the following requirements.

Lower Division Requirements
Students complete 12 credit hours including one of WL 100-3 Introduction to World Literature
WL 103-3 Pre-Modern World Literature
WL 104-3 Modern World Literature
plus
WL 200-3 Literary Analysis and Interpretation
and two additional three credit hour lower division WL courses.

Upper Division Requirements
Students complete 16 upper division credit hours in WL courses.

Relevant Topic Courses
With prior approval, students may complete one lower or upper division relevant topic course (up to four credit hours) from outside the World Literature Program by submitting the course description to the world literature advisor.
Faculty of Business Administration

3302 Lohn Building, West Mall Complex, 778.782.3708 Tel, 778.782.4920 Fax, www.sfubusiness.ca/bba/discover

Dean (pro tem)
C.F. Smart BComm, MBA, PhD (Br Col)

Associate Deans
E.W. Bukszar, Jr. (A Carroll), MBA, PhD (Arizona)
M.R. Fizelle BEd, BComm, MSc (Sask), CMA, FCMA

Professors Emeriti
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L.D. Etherington BEd (Alta), MBA, PhD (Wash)
D.R. Finley, BS (Harding), MA, PhD (American, DC), CPA
R.A. Holmes BA, MA, PhD (Sask), S. MSc, MBA (Wash)
C.E. Love BEng, MBA (McM), PhD (Lond)
T.L. Pinfield BSc (Leeds), MS (Carnegie Tech), PhD (Stan)
B. Schoner BEng (McG), MBA, WOnt, PhD (Stan)
S.J. Shapiro AB (Harvard), MBA, PhD (Penn)
M.N. Stark, QA, BA, LLB (Br Col)
W.C. Wedley BComm (Br Col), MBA, PhD (Col)
R.G. Wyckham BComm (WOnt), PhD (Mich State)

Ming and Stella Wong Endowed Chair, Professor in International Business
R.L. Tung BA (York, Can), MBA, PhD (Br Col), FRS(C)

Professors
E.U. Choo BSc (Nan), MSc, PhD (Br Col)
C.P. Egri BComm, MSc, PhD (Br Col)
C.E.N. Emby BComm (Manit), MBA, PhD (Br Col)
I.M. Gomion BA, MA, PhD (Fraser), CGA
R.R. Grauer BComm, MBA, PhD (Calif)
R.D. Iverson BA, MA (Monash), PhD (Iowa)
P.C. Klein BSc, LLB, MBA, WOnt, PhD (Tor), CFA
G.A. Mauser BA, PhD (Calif)
L.N. Meredith BA, MA, PhD (Fraser)
L.Y. Pitt BComm, MBA (Pretoria), MCommerce, PhD (Pretoria)
G. Potraas BA (Dal), MA (McM), MPhil, PhD (Col)
B. Reich BA, PhD (Br Col)
D.M. Shapiro BA (Calg), MA, PhD (Calif)
D.C. Thomas BSc (Appalachian State), MBA (N Carolina), PhD (S Carolina)
R.L. Tung BA (York, Can), MBA, PhD (Br Col), FRS(C)
A.R. Vining LLB (London), MBA, MPP, PhD (Calif)
J.W. Waterhouse BComm, MBA (Alta), PhD (Wash)
M.N. Wexler BA (McG), MBA, WOnt, PhD (York, Can)
J.L. Zachikowsky BHE (Br Col), MSc (Guelph), PhD (Calif)

Associate Professors
N.A.R. Abramson BA (Sask), MBA, PhD (WOnt)
A. Bick BSc, MSc (Tel-Aviv), MBA (Jerusalem), PhD (Calif)
G.W. Blazenko B (Fraser), MA (WOnt), PhD, (Br Col)
E.W. Bukszar, Jr. (A Carroll), MBA, PhD (Arizona)
G.R. Bushe BA (C’dia), PhD (Case W Reserve)
D. Chung BComm (Manit), MSc (Sask), PhD (Alta)
C.M. Collins-Dodd BComm, PhD (Alta)
D. Cyr BA (Vic, BC), MA (New Br), PhD (Br Col)
J.N.P. Francis BSc (Wi), MBA (York, Can), PhD (Wash)
A.G. Gemino BA, MBA, PhD (Fraser), PhD (Br Col)
J.K. Hall BComm MBA (Dal), PhD (Sus)
J.W. Haney BA, MSc (Sask), MBA, PhD (S Fraser), PhD (Alta)
S.M. Kates BBA, MBA, PhD (York)
R. Krider BSc, MSc PhD (Br Col)

B.A. Lautsch BA (Regina), MIR (Qu), PhD (MIT)
T.B. Lawrence BComm, PhD (Alta)
I.P. McCarthy BEng (Kingston, UK), MSc, PhD (Sheff), Canada Research Chair
H. Merchant BComm (Bom), MBA (Clarion), PhD (Purdue)
M. Parent BComm, MBA, PhD (Qu)
D.C. Parker BComm, MBA (Calg), PhD (WOnt)
A.D. Pavlov BSc (Sonoma), MBA, PhD (Thubland), MA, PhD (Calif)
R.W. Schwindt AB, PhD (Calif)*
C.F. Smart BComm, MBA, PhD (Br Col)
A.R. Warburton BA (Br Col), MSc (Montr), PhD (Br Col)

Assistant Professors
M.J. Brydon BEng, MEng (RMC)
J.C.W. Chang BA, MEng (Cornell)
Y. Chen BA, MA (Xiamen), PhD (WOnt)
B.D. Cohen BS Bus (Miami, Ohio), MA (S Carolina), PhD (Colorado)
M. Favere-Marchesi BSc, MAc (Brigham Young), PhD (S Calif), CPA
S. Gupta BEng (Honors) (Punjab Eng Coll, India), MBA, PhD (McG)
D.R. Hannah BComm (Br Col), PhD (Tex)
J. Jerimias BA (State Sch Accountancy, Jakarta), MAcctg, PhD (Wat)
P. Jula BS (Tehran), MS Eng (W Michigan), MS Eng, MEng, PhD Eng (Calif)
R. Krishnan BA (Calicut,India), MBS Econ, PhD (Thuburg)
M.B. Lazaranova M Intl Econ Relations (Nt! & World Econ, Sofia, Bulgaria), MSc (Rutgers)
J. Li BA (Peking), PhD (Indiana)
E.M.A. Maine BA, BSc (Qu), SM, MIT, PhD (Camb)
J. Peloza BComm (Wis, LA), PhD (Calg)
A. Rubin BA, MA (Hebrew), PhD (Br Col)
K.E. Ruckman BSc (Alta), MA, PhD (Br Col)
N. Saraf BEng (Baroda), MBA (Lucknow), PhD (S Calif)
D.R. Smith B’Busines, MBusiness (Qld UT), PhD (Br Col)
M.P. Tingling MBA (Wis, LA), PhD (WOnt)
O. Volkoff BSc (Br Col), MBA, WOnt, MPA, PhD (WOnt)
A.G. von Nordenflycht BA (Stan), PhD (MIT)
C.D. Zattick BA, PhD (Calif)

Adjunct Professors
P. Clarkson BSc (Trent), BA, BComm, MBA (Windsor), PhD (Br Col)
M.S. Fogel BBA, LLB (Texas), MBA, MSc (Sheff), Canada Research Chair
Y. Yang BSc (Fudan), PhD (HKUST)
P. Kedrosky BEng (Car), MBA (Qu), PhD (WOnt)
A. Morgan BBA, MBA, CPA, CFA
C. Perignon BA, MA, MSc (Geneva)
S.G. Powell BA (Trent), MPhil, MBA (Calif), CPA
D. Yee BSc, MSc, PhD (Br Col), CGA, CFA
S. Globerman BA (Brooklyn), MA, PhD (NY)
S. Hall BEng (Paraiba), MEng, PhD (Sa Paulo)
M. Favere-Marchesi BSc (Sheff), Canada Research Chair
M. Gehiere BA (S Fraser), 2329 Lohn Building, 778.782.4524 Tel, 778.782.5571 Fax

Instructors
S. Jones MA (Royal Roads)

Lecturers
S. Spector BA, MA (S Fraser), CGA

Undergraduate Degrees Offered
Bachelor of Business Administration (Honors) Bachelor of Business Administration

Programs Offered
BBA – General Program
Major in Business Administration

Joint Major in Business Administration and Communication
Joint Major in Business Administration and Economics
Joint Major in Business Administration and Geography
Joint Major in Information Systems in Business Administration and Computing Science
Joint Major in Business Administration and Latin American Development Studies
Joint Major in Business Administration and Psychology
Joint Major in Molecular Biology and Biochemistry and Business Administration

Undergraduate Programs

Executive Director
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Please visit www.sfubusiness.ca/bba/discover. Contact us to send an e-mail to our advisors.

Introduction
The faculty offers honors, major and minor programs at both the Burnaby and Surrey campuses, in co-operation with the Faculties of Applied Sciences, Arts and Social Sciences, and Science. The faculty
also offers joint programs. For a complete list, please see Programs Offered above.

The value of a broadly based education is emphasized. Because of this objective, students will take mainly non-business courses during the first 60 hours, completing three categories of courses. The first category consists of lower division requirements which are mainly prerequisites to more advanced upper division business courses. The second category consists of group requirements which roughly correspond to humanities, social science and sciences. In the third category, chosen courses are based on intellectual interest or to achieve academic goals. The first two categories should be completed during the first 60 credit hours.

Students with fewer than 60 credit hours may enrol in a maximum of 18 credit hours. For a course to be accepted as fulfilling a prerequisite, or for a core course to be accepted in a student’s business administration program, a minimum grade of C- (C minus) must be obtained.

Letters of Permission
Please see “Courses at Other Institutions/Letters of Permission” on page 32. The Faculty of Business Administration does not normally approve letters of permission for students already enrolled at Simon Fraser University.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
Students must complete at least 120 credit hours which must include a minimum of 50 credit hours outside the Faculty of Business Administration. Within the 50 credit hours, students must meet the University requirements for breadth — two courses labelled as Breath-Humanities, two courses labelled as Breath-Science, and two courses labelled as Breath-Social Science. Courses not labelled as BUS or BUEC that are taken as part of the lower division requirements may count toward the 50 credit hours outside business administration.

Lower Division Requirements

Students must complete all of BUS 237-3 Introduction to Computers and Information Systems in Business BUS 251-3 Financial Accounting I BUS 254-3 Managerial Accounting I* BUS 272-3 Behavior in Organizations ECON 103-3 Principles of Microeconomics ECON 105-3 Principles of Macroeconomics and one of BUEC 232-4 Data and Decisions I STAT 270-3 Introduction to Probability and Statistics and one of BUS 207-3 Managerial Economics* ECON 301 Microeconomic Theory I: Competitive Behavior and one of MATH 150-4 Calculus I with Review MATH 151-3 Calculus I MATH 154-3 Calculus I for the Biological Sciences MATH 157-3 Calculus for the Social Sciences I and two of ENGL 101-3 Introduction to Fiction ENGL 102-3 Introduction to Poetry ENGL 103-3 Introduction to Drama ENGL 104-3 Introduction to Prose Genres ENGL 105-3 Introduction to Issues in Literature and Culture ENGL 199-3 Introduction to University Writing PHIL 001-3 Critical Thinking PHIL 100-3 Knowledge and Reality PHIL 120-3 Introduction to Moral Philosophy *may be completed following admission to the faculty.

Upper Division Requirements

In the last 60 credit hours, students must take a minimum of 45 upper division credit hours, of which a minimum of 36 credit hours must be in business administration or BUEC courses. The 36 upper division credit hours in business administration must include the following:

• all core courses (see Core Courses below)
Further upper division courses in any discipline must be completed to bring the total upper division credit to 45 credit hours minimum.

Students may not enroll in upper division (300 and 400 division) business administration courses before completing the first 60 lower division credit hours, with two exceptions:

- approved business majors and minors may take upper division BUS courses after the completion of 45 credit hours
- Any 300 or 400 division course taken before the completion of 60 credit hours will not count as fulfilling the 45 upper division credit hours required in the final 60 hours of the program, or as part of the upper division hours for the major or minor.

Core Courses
Students majoring in business administration are required to complete all of:

- BUS 303-3 Business, Society and Ethics
- BUS 312-4 Introduction to Finance
- BUS 336-4 Data and Decisions II
- BUS 343-3 Introduction to Marketing
- BUS 30W4-4 Business Communication
- BUS 393-3 Commercial Law
- BUS 478-3 Seminar in Administrative Policy
and one of:
- BUS 374-3 Organization Theory
- BUS 381-3 Introduction to Human Resource Management

It is recommended that students complete BUS 360 before their 75th credit hour.

Areas of Concentration
Students must complete a concentration within one or more of the following areas by completing the courses specified below.

Accounting
- BUS 251-3 Financial Accounting I
- BUS 254-3 Managerial Accounting I
- BUS 320-3 Financial Accounting: Assets
- BUS 321-3 Financial Accounting: Equities
- BUS 323-3 Intermediate Managerial Accounting
- BUS 421-3 Accounting Theory
and one of:
- BUS 420-3 Advanced Accounting
- BUS 424-3 Advanced Managerial Accounting
- BUS 426-3 Auditing and Assurance: Concepts and Methods

*must be completed at Simon Fraser University

Entrepreneurship
- BUS 342-3 Foundations of Entrepreneurship
- BUS 361-3 Project Management
- BUS 314-3 New Venture Finance
- BUS 443-3 Marketing for New Ventures
- BUS 486-3 Leadership

Finance
- BUS 312-4 Introduction to Finance
- BUS 315-4 Investments
- BUS 316-3 Derivative Securities
- BUS 319-3 International Financial Management
- BUS 419-3 Advanced Derivative Securities

Human Resource Management
Students must complete one of:
- BUS 374-3 Organization Theory
- BUS 381-3 Introduction to Human Resource Management
and one of:
- BUS 482-3 Performance Management
- BUS 487-3 Organizational Development and Change Management
and three of:
- BUS 485-3 Negotiations and Conflict Management
- BUS 432-3 International Human Resources Management
- BUS 472-3 Seminar in Organizational Behavior
Students may count toward the requirements for the area of concentration.

Core Courses
- BUS 381-3 Introduction to Human Resource Management
- BUS 482-3 Performance Management
and three of:
- BUS 485-3 Negotiations and Conflict Management
- BUS 432-3 International Human Resources Management
- BUS 481-3 Recruitment and Selection
- BUS 488-3 Group Dynamics and Teamwork

Option A
Students who wish to become a personnel specialist in a human resource function should take both of:
- BUS 381-3 Introduction to Human Resource Management
- BUS 482-3 Performance Management
and three of:
- BUS 485-3 Negotiations and Conflict Management
- BUS 432-3 International Human Resources Management
- BUS 481-3 Recruitment and Selection
- BUS 488-3 Group Dynamics and Teamwork

Option B
Students who wish to develop skills in managing people, including employment systems design, change and organizational leadership, should take both of:
- BUS 374-3 Organization Theory
- BUS 487-3 Organizational Development and Change
and three of:
- BUS 485-3 Negotiations and Conflict Management
- BUS 432-3 International Human Resources Management
- BUS 484-3 Employment Systems
- BUS 486-3 Leadership
- BUS 488-3 Group Dynamics and Teamwork

International Business
- BUS 346-3 International Business
and one of:
- BUS 380-3 Comparative Management
- BUS 432-3 International Human Resources Management
and one of:
- BUS 434-3 Foreign Market Entry
- BUS 435-3 Management of International Firms
- BUS 431-3 Business with East Asian Countries

Management and Technology
BUS 338-3 Managing Technological Innovation
BUS 361-3 Project Management
and two of:
- BUS 362-4 Systems Analysis and Design
- BUS 445-3 Analysis of Data for Management
- BUS 462-4 Management Support Systems
- BUS 474-3 Supply Chain Management

Management Information Systems
BUS 361-3 Project Management
BUS 362-4 Information Analysis and Systems Design
BUS 468-3 Management Issues in Information Systems
and one of:
- CMPT 110-3 Event Driven Programming in Visual Basic
- CMPT 120-3 Introduction to Computing Science and Programming I
and two of:
- BUS 462-4 Management Support Systems
- BUS 464-3 Building Business Systems
- BUS 486-3 Managing Data Communications
- BUS 492-496-3 Selected Topics in Business Administration

Management Science
BUS 336-4 Data and Decisions II
BUS 473-4 Operations Management
and two of:
- BUS 433-5 Forecasting in Business and Economics
- BUS 437-3 Decision Analysis in Business
- BUS 440-4 Simulation in Management Decision Making
- BUS 474-3 Supply Chain Management
- BUS 492-3 Special Topics in Business Administration
(if/when offered with a management science topic)

Marketing
- BUS 343-3 Introduction to Marketing
- BUS 347-3 Consumer Behavior
- BUS 442-4 Introduction to Marketing Research
and three of:
- BUS 344-3 Business to Business Marketing
- BUS 445-3 Analysis of Data for Management
- BUS 446-4 Marketing Strategy
- BUS 447-3 International Marketing Management
- BUS 448-4 Advertising and Sales Promotion
- BUS 449-2 Marketing and Society
- BUS 459-3 Services Marketing

Honors Program
After the completion of 15 upper division business administration credit hours, students may apply to enter the honors program.

Honors students must meet all major program requirements except where specifically modified for joint honors programs. The honors program requires 12 credit hours of 400 division courses beyond the 120 credit hours required for the major. These credit hours must be in 400 division BUS or BUEC courses or in other faculties approved in advance by the executive director of the undergraduate program. The 12 credit hours are in addition to the area of concentration and major program core courses.

In the last 72 credit hours, an honors student must complete a minimum of 57 upper division credit hours, of which 42 must be in BUS or BUEC.

Grade Point Averages
For entry, continuance and graduation, the following grade point averages will be used.
Honors Semester at the Segal Graduate School of Business

Simon Fraser University's Segal Graduate School of Business provides a unique opportunity for senior students enrolled in the undergraduate program in business administration to participate in a 12 credit hour program fulfilling the requirements of the honors portion of their degree requirements by completing all of:

- BUS 456-4 Segal Honors Seminar I
- BUS 457-4 Segal Honors Seminar II
- BUS 458-4 Segal Honors Seminar III

The honors semester at Segal will be offered once a year, usually in the fall or spring term.

Students may apply when they have a minimum of 90 credit hours. Application forms are available in the undergraduate program offices, 2330 Lohn Building. Application deadline for the spring 2008 Honors Semester at Segal is October 31, 2007.

Each full-time, one-term program emphasizes:
- current issues in business and society
- industry interaction
- dialogue and discussion as conduits for student centered learning
- small class sizes

Proposed entrance requirements:
- 105 credit hours
- minimum 3.5 cumulative grade point average

Possible themes:
- sustainability and business – corporate environmental policy, sustainability and society, management of non-renewable resources, environmental finance and risk management
- ethics and corporate social responsibility – corporate environmental policy, ethics, leadership and scandal in large organizations, CSR as a strategic management tool
- business and globalization – outsourcing, managing the virtual company, globalization and the local business, the role of business in economic development
- management during technological change – HRM in a hi-tech environment, leadership and technological change; entrepreneurship and technological innovation, marketing the 'new new thing'

Minor Program

Lower Division Requirements

BUEC 232-4 Data and Decisions I (or STAT 270)
BUS 237-3 Introduction to Computers and Information Systems in Business (or a 200 division CMPT course)
BUS 251-3 Financial Accounting I
BUS 254-3 Managerial Accounting I
BUS 272-3 Behavior in Organizations
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MATH 157-3 Calculus for the Social Sciences I

*may be completed after admission to the faculty

Upper Division Requirements

If permission is granted to take any 300 or 400 division BUS or BUEC course before the completion of 60 credit hours, then those courses will not count toward fulfilling the 16 upper division hours for the minor.

Joint Major in Business Administration and Communication

Students complete at least 32 upper division credit hours in business administration or BUEC courses including the core courses, and the marketing courses specified below.

Marketing Required Courses

BUS 343-3 Introduction to Marketing
BUS 347-3 Consumer Behavior
BUS 442-4 Introduction to Marketing Research

Communication Lower Division Requirements

CMNS 110-3 Introduction to Communication Studies
CMNS 130-3 Explorations in Mass Communication

Communication Upper Division Requirements for Marketing Concentration

Students must complete six courses (24 credit hours) of upper division courses in communication including:

CMNS 323-4 Cultural Dimensions in Advertising
CMNS 425 is recommended but not required.

Joint Major in Information Systems in Business Administration and Computing Science

Students must qualify for and receive admission to, and must remain qualified for continuance in, the Faculty of Business Administration, and must be accepted as a computing science joint major.

Lower Division Requirements

Students must complete one of:

BUEC 232-4 Data and Decisions I (or STAT 270)
CMPT 125-3 Introduction to Probability and Statistics

or both of:

CMPT 126-3 Introduction to Computer Science and Programming
CMPT 125-3 Introduction to Computing Science and Programming
ECON 102-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 151-3 Calculus I (or 157)
MATH 152-3 Calculus II (or 158)
MATH 232-3 Elementary Linear Algebra
and two of the following writing courses
ENGL 101-3 Introduction to Fiction
ENGL 102-3 Introduction to Poetry
ENGL 103-3 Introduction to Drama
ENGL 104-3 Introduction to the Essay as Literature
ENGL 105-3 Introduction to Issues in Literature and Culture
ENGL 199-3 University Writing
PHIL 100-3 Knowledge and Reality
PHIL 120-3 Introduction to Moral Philosophy

Upper Division Requirements
all of BUS 312-4 Introduction to Finance
BUS 336-4 Data and Decisions II
BUS 343-3 Introduction to Marketing
BUS 364-3 Information Systems in Organizations and Society
BUS 468-3 Management Issues in Information Systems
BUS 478-3 Seminar in Administrative Policy
CMPT 300-3 Operating Systems
CMPT 307-3 Data Structures and Algorithms
CMPT 320-3 Social Implications of a Computerized Society
CMPT 354-3 Database Systems and Structures
CMPT 370-3 Information System Design
and one of BUS 374-3 Organization Theory
BUS 381-3 Introduction to Human Resource Management
and one of BUS 466-3 Managing Data Communications
CMPT 371-3 Data Communications and Networking
plus nine additional upper division CMPT credit hours, excluding CMPT 301. At least one of the courses must be at the 400 division or above. Upon completion of these requirements, students may choose either a BBA degree (offered by the Faculty of Business Administration), or a BSc degree (offered by the Faculty of Applied Sciences) with the completion of two additional specific courses. See “Joint Major in Business Administration and Computing Science” on page 116 regarding the BSc requirements for joint majors.

Joint Major in Business Administration and Economics
Students complete at least 29 upper division credit hours in business administration or BUEC, including the core courses with the following exceptions.
• BUS 207 and 303 are waived.
• BUEC 333, which must be taken, will count as upper division economics hours rather than as upper division business administration hours.
Three courses beyond the core must be completed within the requirements of a single concentration. At least two 400 division BUS or BUEC courses* (excluding practicum courses and BUS 478)* may be within the area of concentration. Students must also complete at least 25 upper division credit hours in economics or BUEC* including ECON 301-4 Microeconomic Theory I: Competitive Behavior
ECON 305-5 Intermediate Macroeconomic Theory and at least one 400 division economics or BUEC* course (excluding ECON 431, 435, BUEC 433 and 485).

Economics Group Requirements
Students must complete one of ECON 102-3 The World Economy
ECON 104-3 Economics and Government
ECON 110-3 Foundations of Economic Ideas
ECON 208-3 History of Economic Thought
ECON 250-3 Economic Development in the Pre-Industrial Period
ECON 309-3 Introduction to Marxian Economics
ECON 354-3 Economic History of Canada
ECON 355-4 Economic Development
ECON 400-3 Honors Seminar in Methodology of the Social Sciences
ECON 409-3 Seminar in Economic Thought
ECON 450-3 Seminar in Quantitative Economic History
ECON 451-3 Seminar in European Economic History
ECON 452-3 Economic Prehistory
ECON 453-3 The Economics of Education
ECON 455-3 Seminar in Economic Development
ECON 490-3 Seminar in Public Choice
*BUEC courses may count only once as business administration credit hours or as economics credit hours.

Joint Major in Business Administration and Geography
Business Administration Requirements
The student must successfully complete the core courses and complete one additional 400 division course in the Faculty of Business Administration.

Geography Requirements
The student must successfully complete a minimum of 15 lower division geography credit hours including GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
GEOG 221-3 Economic Geography
The student must successfully complete a minimum of 24 credit hours of upper division geography courses including the following.
12 credit hours at the 300 division courses
12 credit hours at the 400 division courses

Joint Major in Business Administration and Latin American Development Studies
Business Administration Requirements
The student must successfully complete the core courses (which must include BUS 346) and two of the following courses.
BUS 380-3 Comparative Management
BUS 434-3 Foreign Market Entry
BUS 435-3 Management of International Firms
BUS 439-3 North American International Trade Issues
BUS 447-3 International Marketing Management
With the permission of the international business area co-ordinator and the faculty, another course may be substituted for one of the seven listed above.

Latin American Development Studies Requirements
Lower Division
Students must demonstrate reading and speaking competence in Spanish or Portuguese equivalent to successful completion of three college level courses.
A minimum of 12 credit hours is required including LAS 200-3 Introduction to Latin American Issues plus any two of ARCH 273, HIST 208, 209
plus one of BUS 130, CMNS 110, 130, ECON 102, 110, GEOG 100, 111, POL 100, REM 100, SA 101, 150.

Upper Division
Students must complete 20 upper division credit hours with primary or substantial Latin American development studies focus, including LAS 498-5 Capstone Project.
The remaining 15 credit hours must come from the approved list in the Latin American Development Studies section of the Calendar (see “Courses with Primary Latin American Focus” on page 171).

Joint Major in Molecular Biology and Biochemistry and Business Administration
See “Joint Major in Molecular Biology and Biochemistry and Business Administration” on page 227.

Joint Major in Business Administration and Psychology
Business Administration Requirements
• successful completion of at least one 400 division management and organization studies course study
• completion of the business administration core courses, except with advance permission of the Faculty of Business Administration, the combination of PSYC 210 and 301 may be substituted for the combination of BUEC 232* and BUS 336.

Psychology Requirements
Lower Division Requirements
all of PSYC 100-3 Introduction to Psychology I*
PSYC 102-3 Introduction to Psychology II*
PSYC 201-4 Introduction to Research Methods in Psychology*
PSYC 207-3 Introduction to the History of Psychology*
PSYC 210-4 Introduction to Data Analysis in Psychology*
PSYC 260-3 Introduction to Social Psychology
*to be admitted to the psychology program, students must obtain a final course grade of C (2.0) or better in each of these courses.

Note: The above requirement applies to courses transferred from other institutions as well as to courses taken at Simon Fraser University. Students must complete one of PSYC 221-3 Introduction to Cognitive Psychology
PSYC 241-3 Introduction to Abnormal Behavior
PSYC 250-3 Introduction to Developmental Psychology
PSYC 268-3 Introduction to Law and Psychology
PSYC 270-3 Introduction to Theories Personality
PSYC 280-3 Introduction to Biological Psychology

Upper Division Requirements
Students must complete 21 credit hours in upper division psychology courses. No more than three of these credit hours may be in directed studies. At least 11 upper division psychology credit hours must be taken at Simon Fraser University.
Note: students must complete either BUEC 232* and BUS 336 or PSYC 210 and 301. Students who complete BUS 336 must still fulfill a minimum of 21 upper division psychology credit hours. Students who
complete PSYC 301 must still fulfill a minimum of 24 upper division credit hours in business administration.

Joint Honors in Business Administration and Economics

Economics Group Requirements
Students must include at least one of
ECON 102-3 The World Economy
ECON 110-3 Foundations of Economic Ideas
ECON 208-3 History of Economic Thought
ECON 250-3 History of Economic Development A
ECON 252-3 History of Economic Development B
ECON 309-3 Introduction to Marxian Economics
ECON 353-5 Economic History of Canada
ECON 355-4 Economic Development
ECON 404-3 Honors Seminar in Methodology of the Social Sciences
ECON 409-3 Seminar in Economic Thought
ECON 450-3 Seminar in Quantitative Economic History
ECON 451-3 Seminar in European Economic History
ECON 455-3 Seminar in Economic Development

Lower Division Requirements
The requirements are the same as for the joint major in business administration and economics.

Upper Division Requirements
- at least 35 upper division credit hours in business administration including the core courses
- an area of concentration
- at least three 400 division courses (excluding practicum courses and BUS 478). These courses may be within the area of concentration.
- plus at least 32 upper division credit hours in Economics or BUEC including
- BUEC 333-4 Statistical Analysis of Economic Data
- ECON 301-4 Microeconomic Theory I: Competitive Behavior
- ECON 305-5 Intermediate Macroeconomic Theory
- ECON 331-5 Introduction to Mathematical Economics
- ECON 435-5 Quantitative Methods in Economics
- ECON 499-6 Honors Seminar in Economics

and one of
- ECON 402-3 Advanced Topics in Microeconomics
- ECON 403-3 Advanced Topics in Macroeconomics

Joint honors students who have completed both MATH 232 and 251 need not complete ECON 331. However, at least 32 upper division ECON credit hours must still be taken.

Grade Point Averages
For entry, continuance and graduation with a BBA, the following grade point averages will be used.
- minimum 3.00 cumulative GPA (3.5 for first class honors at graduation)
- minimum 3.00 GPA for upper division BUS courses (3.5 for first class honors at graduation)
- minimum 3.00 GPA for upper division BUEC courses (3.5 for first class honors at graduation)
- minimum 3.00 GPA for upper division ECON courses (3.5 for first class honors at graduation)

For information about required grade point averages for the BA credential, Grade Point Averages Needed for Graduation 35.

Joint Honors in Molecular Biology and Biochemistry and Business Administration
For information, see “Joint Honors in Molecular Biology and Biochemistry and Business Administration” on page 228.

Second Bachelor's Degree
Please see “Second Bachelor’s Degrees” on page 7.

The minimum requirements for completion of a second undergraduate degree in business administration (BBA) are as follows.
- formal admission to the program
- lower division course requirements
- writing, quantitative and breadth requirements (see “English Language and Literacy Admission Requirement” on page 19 and “Quantitative and Analytical Skills Requirement” on page 19)
- 45 upper division credit hours, of which 36 must be business administration (BUS) or business administration/economics (BUEC)
- 36 upper division BUS or BUEC credit hours which must include core courses, an area of concentration and the 400 division requirement

See “Major Program” on page 193 for information.

Exchange Programs
Contacts
Ms. R. Ng BA (S Fraser), international student co-ordinator, 2352 Lohn Building, 778.782.5564 Tel
co-ordinator, International Mobility, SFU International, 1200 Maggie Benston Student Services Centre, 778.782.4555 Tel
co-ordinator, International Mobility, SFU International, 1200 Maggie Benston Student Services Centre, 778.782.5887 Tel

The faculty participates in undergraduate student exchange agreements with the following institutions.

- Austria
  - Monash University
- Austria
  - Vienna University of Economics and Business Administration
- Chile
  - Pontifica Universidad Catolica de Chile (PUC)
- China
  - Chinese University of Hong Kong
  - University of Hong Kong
- Denmark
  - Copenhagen Business School
- Finland
  - Helsinki School of Economics
- France
  - ESCP-EAP European School of Management
  - Grenoble Ecole de Management
- Germany
  - University of Mannheim
  - Ireland
  - Quinn School of Business
  - University College Dublin
- Italy
  - Bocconi University
- Japan
  - Ritsumeikan Asia-Pacific University
- Korea
  - Yonsei University
  - Seoul National University
- Mexico
  - Instituto Tecnológico Autonomo de Mexico (ITAM)
  - Instituto Tecnologico y de Estudios Superiores de Monterrey (ITESM)
- Netherlands
  - Maastricht University
- New Zealand
  - University of Auckland
- Norway
  - BI Norwegian School of Management
- Russia
  - Plekhanov Russian Academy of Economics
- Singapore
  - National University of Singapore
- Spain
  - University of Navarra
- Sweden
  - Lund University
- Taiwan
  - National Chengchi University
  - National Taiwan University
- Thailand
  - Chulalongkorn University
- United Kingdom
  - Manchester Business School
  - University of Bath School of Management
  - Strathclyde Business School
- United States
  - San Diego State University

Although the Faculty of Business Administration promotes the institutions listed on this page through travel subsidies, students are not restricted to these universities. In addition to those listed here, Simon Fraser University has exchange agreements with many more institutions. For more information about application deadlines, etc., please contact SFU International or see www.sfu.ca/international.

Summer Field School
The summer field school, consisting of three courses that total nine credit hours, is delivered over a six week period in the summer term. One of these courses will have a cultural component so that students will gain an appreciation of the local environment and build strong ties with local students and faculty members.

The program’s focus will be centred on various business issues that will expand students’ knowledge of foreign markets, specifically those involving the host institution’s country and geopolitical region. Additionally, corporate field trips and guest lecturers will complement the course material.

The field school, offered annually, will be located in Europe, Central or South America or Asia and will include one faculty member and up to 20 students.

Co-operative Education
2310 Lohn Building, 778.782.3619 Tel, 778.782.5922 Fax, www.sfu.ca/coop

The Faculty of Business Administration offers co-operative education to students including Simon Fraser University Surrey. Co-operative education formally integrates a student’s academic studies on campus with relevant work experience. Employers from business, industry and government support and participate in the program. This ‘hands-on’ approach to education extends the learning process beyond the limits of the classroom and into the working world by alternating full time study terms with full time paid work terms of career-related practical experience.

For those seeking a professional accounting designation (CA, CGA, CMA) arrangements have been made with respective accounting organizations so that work experience obtained during the program may be recognized toward the required practical experience.
Admission
Admission to the Faculty of Business Administration is required before intake to the co-operative education program is considered.
A student must remain in good academic standing in the Faculty of Business Administration to continue in the program.
Co-op programs are open to Canadian citizens, permanent residents, and visa students.

Application Process
Co-operative education has an application process which includes completing the Bridging Online (BOL) course. Refer to www.sfu.ca/coop/bol. BOL must be completed prior to your business co-op intake.

Practicum Course Requirements
To qualify for the bachelor of business administration with a major in business administration and a co-operative education designation, students must meet University and Faculty of Business Administration graduation requirements.
In addition, students who choose the chartered accountancy option must complete four work terms. A co-operative education designation requires four work terms and a certificate requires three work terms.
During study terms a student must maintain full time status. A brochure which outlines program features is available from the business administration co-op education program co-ordinators.

Business Career Management Centre
Career Manager
N. Fournier BA (Br Col), 2361 Lohn Building,
778.782.5544 Tel, 778.782.3028 Fax,
bbacareers@sfu.ca, www.sfu.ca/careers

The Business Career Management Centre offers resources and services to assist undergraduate and graduate students in the Faculty of Business Administration with preparation for business careers. One-on-one career counselling and advising, career workshops, company information sessions, on-campus recruitment activities, and the annual Business Career Expo provide opportunities to meet and network with employers. Extensive career-related resources are available at the centre and online at www.sfu.ca/careers. Simon Fraser University business students and alumni have access to full time, part time, ongoing, temporary and volunteer work opportunities via workopoliscampus.com – keyword "BBA".
Faculty of Education

8501 Education Building, 778.782.3395 Tel, 778.782.3303 Fax, www.educ.sfu.ca

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Associate Dean
C.M. Mamchur BA, BEd, MEd (Sask), EdD (Flor)
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S. Ballin BA, BEd, MEd, PhD (Tor)
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S. Blenkinsop BScH (Qu), MS (Minn), MEd, Assistant Professors
D. Zandvliet BSc (Guelph), MA (Vic, BC), PhD (S Fraser)
C. Snowber BA (SWMass), MA (Gordon-Conwell), (Qld), PhD (Alta)
S. J. Smith BEd (Kelvin Grove CAE), BHMS, MEd (Qld), PhD (Br Col)
D. Paterson BEd (Alta), MA, PhD (Br Col)

Undergraduate Degrees Offered
Bachelor of Education (Honors) Bachelor of Education
Diplomas and Certificate Offered
Certificate in Literacy Instruction Post Baccalaureate Diploma (General) Post Baccalaureate Diploma in Early Childhood Education
Post Baccalaureate Diploma in Special Education Post Baccalaureate Diploma in Environmental Education
Undergraduate Programs
8627.1 Education Building, 778.782.3614 Tel, 778.782.3829 Fax, www.educ.sfu.ca/ugradprog
15th floor Central City, 250–13450 102 Avenue, Surrey, BC V3T 0A3, 778.782.8124 Tel, 778.782.8119 Fax
Director
D. Paterson BEd (Alta), MA, PhD (Br Col)
Advisor
Ms. J. Breadon, 8627.1 Education Building, 778.782.3436 Tel, 778.782.3829 Fax, breadon@sfu.ca
Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information.

Bachelor of Education Program
The BEd must be approved by the Faculty of Education. Major or minor requirements also must be approved by the department(s) in which these requirements are administered. To complete a BEd, a student must make application, and be accepted to the professional development program. The BEd is designed to prepare students academically and professionally for a teaching career at either the elementary or secondary school level. Students considering the BEd degree should seek academic counselling for Lower Divisions (first 60 credit hours)
Contact Student Academic Resources, 3300 Maggie Benston Student Services Centre, 778.782.4365.
Upper Divisions (BEd degree, education minors, certificate in literacy instruction, post baccalaureate diplomas)
Contact the Undergraduate Advising Office, 8560 Education Building, 778.782.3436
Transfer Credit
Students may be admitted to the BEd program with advance standing. Credit may be granted for appropriate work at other institutions to a 60 credit hour maximum excluding professional education, or 90 credit hours including an acceptable year of professional education (EDUC 401, 402 and 405).

General Program
Requirements
Students must complete a minimum of 150 credit hours which includes one of the following:
• a major from the Faculties of Applied Sciences, Arts and Social Sciences, or Science, or
• two minors/extended minors, completed from the Faculties of Applied Sciences, Arts or Science or the Mathematical Sciences specialization completed from the Faculty of Education and all of the following:
  • a minor from the Faculty of Education (may be fully or partially completed during EDUC 404)
  • EDUC 401, 402, 405
  • a minimum of 54 credit hours in upper division courses (numbered 300 and 400), excluding EDUC 401, 402, 405, 406, and 407
  • two of EDUC 220, 230, 240 or 250
  • a minimum of 24 credit hours of upper division education courses (excludes EDUC 401, 402, 405, 406 and all EDPR courses) which must include two Faculty of Education Designs for Learning courses (may include courses taken for EDUC 404 or for the education minor)
  • certificate in liberal arts
  • Students must achieve both a minimum cumulative grade point average (CGPA) of 2.0 and a minimum grade point average (GPA) of 2.0 calculated on the basis of all upper division courses taken at Simon Fraser University.

Honors Program
Requirements
Students must complete a minimum of 162 credit hours which include:
• an honors from the Faculties of Applied Sciences, Arts and Social Sciences, or Science
• a minor from the Faculty of Education (may be fully or partially completed during EDUC 404)
• a minimum of 54 credit hours in upper division courses (numbered 300 and 400), excluding EDUC 401, 402, 405, 406, and 407
• two of EDUC 220, 230, 240 or 250
• a minimum of 24 credit hours of upper division education courses (excludes EDUC 401, 402, 405, 406, and all EDPR courses) which must include two Faculty of Education Designs for Learning courses (may include courses taken for EDUC 404 or for the education minor)
• certificate in liberal arts
• Students must achieve both a minimum cumulative grade point average (CGPA) of 2.0 and a minimum grade point average (GPA) of 2.0 calculated on the basis of all upper division courses taken at Simon Fraser University.
Bachelor of Education as a Second Degree
To be admitted, students must possess a bachelor's degree and have been admitted to the Professional Development Program.

Requirements
45 upper division credit hours in education which includes
EDUC 401-8 Introduction to Classroom Teaching
EDUC 402-7 Studies of Educational Theory and Practice
EDUC 405-15 Teaching Semester

Any additional course work needed to address academic requirements for a professional certificate and additional requirements to complete a minor must be done over and above the required 45 credit hours.

Note: It is the student's responsibility to ensure that they meet the BC College of Teachers requirements for a Professional Teaching Certificate.

Education Courses in French
www.sfu.ca/baff-offs/educfr

Professional Development Program
This one year teacher training program is an integral component of the Bachelor of Education requirements. Admission is by application. Declaration of BED as a degree goal does not guarantee acceptance into PDR. See "Professional Development Program (PDP)" on page 204.

Mathematical Sciences Specialization
For a bachelor of education degree with a mathematical sciences specialization, students must complete 150 hours which include the following, as well as all the bachelor of education requirements.

Lower Division Requirements
Students must complete at least 20 credit hours from:
CMPT 101-4 Introduction to Computer Programming
CMPT 201-4 Data and Program Abstraction
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 113-3 Euclidean Geometry
MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 154-3 Calculus I for the Biological Sciences
MATH 155-3 Calculus II for the Biological Sciences
MATH 171-1 Computer Explorations in Calculus I
MATH 172-1 Computer Explorations in Calculus II
MATH 190-4 Principles of Mathematics for Teachers*
MATH 223-2 Elementary Linear Algebra
MATH 242-3 Introduction to Analysis
STAT 270-3 Introduction to Probability and Statistics

*students who have completed, or are currently taking, any calculus course may not take MATH 190 for further credit

Upper Division Requirements
Students must also complete at least 30 credit hours from the following.
CMPT 320-3 Social Implications of a Computerized Society
CNS 491-3 Technology and Canadian Society
HIST 360-4 History of Science: 1100-1725

MACM 316-3 Numerical Analysis I
MATH 308-3 Linear Programming
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 332-9 Introduction to Applied Algebraic Systems
MATH 339-3 Groups and Symmetry
MATH 342-3 Elementary Number Theory
MATH 343-3 Applied Discrete Mathematics
MATH 380-3 History of Mathematics
MATH 439-3 Algebraic Systems
MATH 447-4 Coding Theory
STAT 330-3 Introduction to Statistical Inference

Minor in Counselling and Human Development
This minor teaches a combination of theoretical, empirical, and practical matters central to the understanding and practice of counselling and human development. The course work provides students with a strong theoretical and critical foundation on which to base and evaluate counselling and teaching practices aimed at enhancing human development.

Lower Division Requirements
EDUC 220-3 Introduction to Educational Psychology
EDUC 222-3 Research Methods in Educational Psychology
PSYC 250-3 Introduction to Developmental Psychology

Upper Division Requirements
(15 credit hours minimum) Students must complete both of:
EDUC 322-3 Social Lives of School Children
EDUC 323-3 Introduction to Counselling Theories
Students must also complete three electives selected from the following. At least two of
EDUC 327-3 Self, Psychology and Education
EDUC 328-3 Theories of Career Development and Education
EDUC 423-4 Helping Relationships
EDUC 444-4 Early Childhood Education
If courses chosen from the list above do not add up to a minimum of 15 credit hours, then one additional course chosen from the following is required:
EDUC 422-4 Learning Disabilities
EDUC 428-4 Nature and Nurture of Gifted Students
EDUC 437-3 Ethical Issues in Education
EDUC 441-4 Multicultural/Anti-Racist Education
EDUC 445-4 Legal Context of Teaching

Minor in Curriculum and Instruction
This minor is for those desiring theoretical and practical expertise in contemporary approaches to curriculum development and instructional design.

Lower Division Requirements
Students must complete two of
EDUC 220-3 Introduction to Educational Psychology
EDUC 230-3 Introduction to Philosophy of Education
EDUC 240-3 Social Issues in Education
EDUC 250-3 Studies in the History of Education in the Western World

Upper Division Requirements
Students must complete
EDUC 471-4 Curriculum Development: Theory and Practice
plus 11 upper division EDUC credit hours and/or EDPR courses to total 15 credit hours.

Minor in Early Childhood Education
This minor provides a focus for students wishing to work with children aged three through eight.

Lower Division Requirements
PSYC 250-3 Introduction to Developmental Psychology

Upper Division Requirements
EDUC 444-4 Early Childhood Education
plus two of
EDUC 330-3 Movement Language Backgrounds in Elementary Classrooms
EDUC 422-4 Learning Disabilities
EDUC 441-4 Multicultural/Anti-Racist Education
EDUC 472-4 Designs for Learning: Language Arts
EDUC 473-4 Designs for Learning: Reading
EDUC 474-4 Designs for Learning: Elementary Social Studies
EDUC 475-4 Designs for Learning: Elementary Mathematics
EDUC 476-4 Designs for Learning: Elementary Sciences

Minor in Education and Technology
This minor provides a structure for undergraduate studies of education and technology.

Lower Division Requirements
Students must complete
EDUC 260-3 Learning and Teaching Through Technology
and one of
EDUC 220-3 Introduction to Educational Psychology
EDUC 230-3 Introduction to Philosophy of Education
EDUC 240-3 Social Issues in Education

Upper Division Requirements
Students must complete all of
EDUC 358-3 Foundations of Educational Technology
EDUC 463-4 Multimedia for Curriculum Design
EDUC 482-4 Designs for Learning: Information Technology
and one of
EDUC 320-3 Instructional Psychology
EDUC 428-4 Nature and Nurture of Gifted Students
EDUC 437-4 Ethical Issues in Education
EDUC 471-4 Curriculum Development: Theory and Practice

Minor in Educational Psychology
Educational psychology makes theoretical and experimental inquiries into how students learn from instruction, how they acquire and express motivation in educational settings, and how they develop skills in school subjects and for learning. This program also studies how this first line of inquiry contributes to designs for instructional experiences that promote a full spectrum of achievements.

The minor consists of required courses that develop a broad background in educational psychology supplemented by electives that deepen fundamentals. For a teaching career, it provides a research based foundation in the psychology of teaching and learning underlying a professional studies program. For others, the minor articulates applied psychology serving one of our society's most important aims, education of people of all ages.

Lower Division Requirements
EDUC 220-3 Introduction to Educational Psychology
EDUC 222-3 Research Methods in Educational Psychology

Upper Division Requirements
Students must complete all of
EDUC 320-3 Instructional Psychology

Simon Fraser University 2007 • 2008 Calendar
EDUC 325-3 Assessment for Classroom Teaching
EDUC 326-3 Classroom Management and Discipline
plus two of
EDUC 327-3 Self, Psychology and Education
EDUC 422-4 Learning Disabilities
EDUC 426-4 Nature and Nurture of Gifted Students
EDUC 464-4 Early Childhood Education

Minor in Environmental Education
This minor develops teachers’ skills in the design and operation of environmental and outdoor education programs from kindergarten through grade 12, and in the organization and operation of residential and day centre outdoor education, wilderness outdoor recreation, and other interdisciplinary environmental school programs.

Prerequisite Courses
Students must complete nine hours selected from:
BISC 102-4 General Biology
BISC 204-3 Introduction to Ecology*
EDUC 240-3 Social Issues in Education
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
GEOG 215-3 Biogeography*
GEOG 241-3 Social Geography
KIN 142-3 Introduction to Kinesiology
PHIL 001-3 Critical Thinking
PHIL 120-3 Introduction to Moral Philosophy
PSCY 106-3 Psychological Issues in Contemporary Society
SA 150-4 Introduction to Sociology
SA 202-4 Post-Industrial Society
*students with credit for GEOG 215 may not receive credit for BISC 204

Required Courses
Students must complete a minimum of 14 hours as specified below.
EDUC 452-8 Environmental Education
plus two of
BISC 304-3 Animal Ecology
BISC 306-3 Invertebrate Biology
BISC 310-3 The Natural History of British Columbia
BISC 317-3 Insect Biology
BISC 337-3 Plant Biology
BISC 403-4 Plant Ecology
EDUC 414-4 Designs for Learning: Secondary Social Studies
EDUC 416-4 Designs for Learning: Secondary Science
EDUC 433-4 Philosophical Issues in Curriculum
EDUC 471-4 Curriculum Development: Theory and Practice
EDUC 474-4 Designs for Learning: Elementary Social Studies
EDUC 476-4 Designs for Learning: Elementary Science
EDUC 459-4 Instructional Activities in Physical Education
EDUC 482-4 Designs for Learning: Information Technology
GEOG 322-4 World Resources
GEOG 369-4 Human Microgeography

Minor in French Education
This minor explores contemporary second language teaching and learning theory, as well as experientially based approaches to French language curriculum development and instructional design, so that culturally informed and appropriate practices can be developed and used in French-speaking classrooms.

Lower Division Requirements
Students complete three EDUC lower division credit hours as well as six FREN credit hours at the 200 division (or can demonstrate an equivalent knowledge of the language).

Upper Division Requirements
Students must complete a minimum of 15 credit hours as specified below, including one or both of EDUC 378-3 Developing Skills for Teaching Core French*
EDUC 380-4 Introduction to Teaching French in Canadian Contexts**
plus one of
EDUC 480-4 Designs for Learning: French as a Secondary Language
EDUC 481-4 Designs for Learning: French Immersion Programs and Francophone Schools
To bring the total to 15 required credit hours as specified above, students must also complete two to three of the following courses, when taught in French:
EDUC 414-4 Designs for Learning: Secondary Social Studies
EDUC 415-4 Designs for Learning: Secondary Mathematics
EDUC 416-4 Designs for Learning: Secondary Science
EDUC 474-4 Designs for Learning: Elementary Social Studies
EDUC 475-4 Designs for Learning: Elementary Mathematics
EDUC 476-4 Designs for Learning: Elementary Science
*required for students entering Université Laval’s Explore Program
**students pursuing second and subsequent degrees are not required to complete this course

Explore Program at Université Laval
Simon Fraser University has an official agreement with Université Laval Language School (ELUL) in Quebec City. Students in this program can take specially designed methodology courses in the Explore program, and then use one of the following Laval courses towards Simon Fraser University’s Minor in French Education.

These courses are recognized by the British Columbia College of Teachers as part of the requirements for teacher certification.

- DID 18200 Didactics of Oral French
- DID 18201 Didactics of Written French
Either of these would replace EDUC 380 as part of the Minor in French Education requirements here at Simon Fraser University
Although not a requirement, students are strongly encouraged to apply for entry into this French as a second language program for the linguistic and cultural experience in a Francophone setting.
A bursary is available through the BC Ministry of Education’s French Program branch.

Minor in International and Global Education
This minor explores an interdisciplinary, experientially based approach to international and global education so that appropriate learning experiences can be created and infused in any given elementary and secondary course.

Lower Division Requirements
Students must complete one of the following.
EDUC 100-3 Questions and Issues in Education
EDUC 230-3 Introduction to Philosophy of Education
EDUC 240-3 Social Issues in Education
EDUC 250-3 Studies in the History of Education in the Western World

Upper Division Requirements
Students must complete a minimum of 15 credit hours as specified below plus an intercultural/international experience (see below).

EDUC 370-4 International and Intercultural Education
EDUC 435-4 Infusing Global Perspectives in Curriculum
and either
one Designs for Learning course and one of the following courses
or two of
EDUC 311-3 Foundations in Aboriginal Education, Language and Culture
EDUC 367-4 Teaching Children and Minority Language Backgrounds in Elementary Classrooms
EDUC 382-4 Diversity in Education: Theories, Policies, Practices
EDUC 441-4 Multicultural/Anti Racist Education
EDUC 448-4 Law in the Curriculum
EDUC 452-4 Environmental Education
EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
EDUC 471-4 Curriculum Development: Theory and Practice

Intercultural/International Experience
In addition to the requirements listed above, an academic intercultural and/or international experience is also required before students complete this minor. This post-secondary experience may be an intercultural experience within Canada, such as a practicum experience in a First Nations community, or outside of Canada. Examples include
- co-operative education placement in an intercultural/international setting
- participation in an international field school program
- international student exchange term outside of Canada or the United States
- teaching English as a foreign language outside of Canada or the United States

Experiences fulfilling the requirements of this minor will need to meet the following criteria.
- successful completion of the program experience as indicated by official documentation from the supervising institution
- an experience with a high degree of participatory involvement
- an experience completed within five years prior to registering in the minor, or five years after completing the course work for the minor

Those who successfully complete the PDP ITEM program or international field school at Simon Fraser University will meet the above requirements.
All other applicants must submit a report indicating the nature of their experience, an analysis of their learning, and a letter of support from a person involved in supervising the experience. The director of undergraduate programs will oversee the submission assessment. A follow-up interview may be required.

Minor in Learning and Developmental Disabilities
This minor enhances understanding of learning and developmental disabilities, and explores an interdisciplinary approach to the health, education and care of infants, children and adults with disabilities.

Lower Division Requirements
Students must complete one of
EDUC 220-3 Introduction to Education Psychology
PSYC 250-3 Introduction to Developmental Psychology

Promoted and Lower Division Courses
It is strongly recommended that minor program students complete at least one of the following.
LING 220-3 Introduction to Linguistics
PSYC 221-3 Introduction to Cognitive Psychology
Upper Division Requirements
Students must complete a minimum of 15 credit hours as specified below.
EDUC 422-4 Learning Disabilities
EDUC 424-4 Learning Disabilities: Laboratory plus one of EDUC 315-3 Individual and Developmental Differences in Language Acquisition
EDUC 476-4 Designs for Learning: Reading plus one of EDUC 426-4 Teaching Children and Youth with Special Needs
EDUC 427-4 Teaching Children with Special Needs in Inclusive Classrooms
EDUC 428-4 Nature and Nurture of Gifted Students
EDUC 475-4 Designs for Learning: Elementary Mathematics
PSYC 354-4 Development of Children’s Thinking
PSYC 355-3 Adolescent Development
PSYC 356-3 Developmental Psychopathology
PSYC 491-3 Developmental Disabilities

Minor in Physical Education
This minor program provides students in the professional development program with competence to teach physical education.

Prerequisite Courses
Prospective students should complete at least three of the following courses (or approved transfer courses from community colleges or other universities) prior to enrolling in EDUC 401. Students should choose those courses which are prerequisites to the upper division courses they will take for the minor.
EDUC 220-3 Introduction to Education Psychology
EDUC 230-3 Introduction to Philosophy of Education
EDUC 240-3 Social Issues in Education
FPA 120-3 Introduction to Contemporary Dance
KIN 105-3 Fundamentals of Human Structure and Function
KIN 110-3 Human Nutrition: Current Issues
KIN 140-3 Contemporary Health Issues
KIN 142-3 Introduction to Kinesiology
KIN 143-3 Exercise Management
KIN 205-3 Introduction to Human Physiology
KIN 241-3 Sports Injuries — Prevention and Rehabilitation

All minor candidates must complete designated curriculum seminars and workshops during EDUC 402 and a specified teaching assignment in physical education during EDUC 405. Details of these requirements are available during EDUC 401. The minor in physical education may not be declared on a student's program until all prerequisites, including a practicum placement in EDUC 405, are met.

Upper Division Requirements
Students must complete a minimum of 14 hours as specified below.
EDUC 416-4 Designs for Learning: Secondary Science
EDUC 430-4 Designs for Learning Dance
EDUC 472-4 Designs for Learning: Elementary Language Arts
EDUC 473-4 Designs for Learning: Reading
EDUC 474-4 Designs for Learning: Elementary Social Studies
EDUC 475-4 Designs for Learning: Elementary Mathematics
EDUC 476-4 Designs for Learning: Elementary Science
EDUC 477-4 Designs for Learning: Art
EDUC 478-4 Designs for Learning: Music
EDUC 480-4 Designs for Learning: French as a Second Language
EDUC 481-4 Designs for Learning: French Immersion and Programme-cadre de Français
EDUC 482-4 Designs for Learning: Information Technology
EDUC 485-8 Designs for Learning: Writing

Minor in Secondary Mathematics Education
This minor will interest pre-service teachers who are considering a career in teaching secondary mathematics.

Admission Requirements
Applicants must have sufficient course work to teach secondary mathematics (usually the equivalent of a minor in mathematics).

Upper Division Requirements
Students must complete a minimum of 15 credit hours as specified below.
EDUC 411-3 Investigations in Mathematics for Secondary Teachers
EDUC 415-4 Designs for Learning: Secondary Mathematics
plus one of the following electives. This list is composed of topics that are directly related to mathematics such as technology, science, philosophy and music.
EDUC 358-3 Foundations of Educational Technology
EDUC 416-4 Designs for Learning: Secondary Science
EDUC 433-4 Philosophical Issues in Curriculum EDUC 463-4 Multimedia for Curriculum Design
EDUC 469-4 Music Education as Thinking in Sound
EDUC 482-4 Designs for Learning: Information Technology
Students must take an additional 300 or 400 division course(s) in education to complete the total of at least 15 credit hours (excluding EDUC 475).

Certificate in Literacy Instruction
Contact the Undergraduate Advising Office, 8627.1 Education Building, 778.782.3436. As of June 2006, a moratorium on program admission is in effect for two years. This certificate prepares students to teach literacy skills to adult learners. By combining courses from different disciplines with opportunities for guided practice, it provides historical and contextual perspectives on literacy, acquaints students with current field practices and develops practical skills. Completion of the certificate is normally within five years of admission to the program.

Program Requirements
Students must complete 29 credit hours, of which 23 are in the following seven required courses.
EDUC 240-3 Social Issues in Education
EDUC 341-3 Literacy, Education and Culture
EDUC 342-3 Contemporary Approaches to Literacy Instruction
EDUC 343-5 Literacy Practicum
ENGL 210-3 Advanced University Writing
plus two of ENGL 101-3 Introduction to Fiction
ENGL 102-3 Introduction to Poetry
ENGL 103-3 Introduction to Drama
ENGL 104-3 Introduction to Prose Genres

In addition, students must complete at least an additional six credit hours in Faculty of Education or Faculty of Arts and Social Sciences courses designated below. Students must select courses that will further their own specific interests in literacy instruction and should be aware that some courses require the completion of prerequisites outside the certificate program.

Faculty of Education
EDUC 325-3 Assessment for Classroom Teaching
EDUC 422-4 Learning Disabilities
EDUC 441-4 Multicultural/Anti-Racist Education
EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
EDUC 471-4 Curriculum Development: Theory and Practice
EDUC 472-4 Designs for Learning: Language Arts
EDUC 473-4 Designs for Learning: Reading

Faculty of Arts and Social Sciences
ENGL 370-4 Studies in Language
ENGL 371-4 Writing: Theory and Practice
HUM 320-4 The Humanities and Philosophy
HUM 321-4 The Humanities and Critical Thinking
LING 260-3 Language, Culture and Society
PHIL 001-3 Critical Thinking
PSYC 206-3 Introduction to Psychological Assessment
SA 304-4 Social Control
SA 333-4 Sociology

Notes
- Credit hours applied to this certificate may not be applied to any other Simon Fraser University certificate or diploma, but they may be applied toward major or minor program requirements or toward a bachelor’s degree under regulations governing those programs.
- At least 15 of the 29 required credit hours must be completed at Simon Fraser University.
- Students must achieve a minimum 2.0 GPA, calculated on all Simon Fraser University courses applied to this program, with the exception that duplicate courses are counted only once.
- The certificate program cannot be used in place of the Faculty of Education Professional Development program or equivalent as a route to a British Columbia teaching certificate.

Post Baccalaureate Diploma (General)
Contact the Undergraduate Advising Office, 8627.1 Education Building, 778.782.3436.
This diploma offers students the opportunity to design and pursue a program of individualized study. Students wishing to use the post baccalaureate diploma to raise their teacher qualifications should speak with the Teacher Qualification Service or their school district regarding acceptable courses.

Program Requirements
Successful completion, within five years, of an approved program comprised of 30 credit hours of upper division or graduate work plus any necessary prerequisites is required. A minimum of 15 of the 30 credit hours must be earned in education and/or educational professional courses and a maximum of 12 may be transfer credits.
Courses taken within 10 years of starting the PBD may (with permission) be considered as part of the requirements for the diploma.
Students must maintain a 2.5 GPA on courses used for the diploma.

Courses taken during the EDUC 404 term may not be used toward a post baccalaureate diploma.

**Post Baccalaureate Diploma in Early Childhood Education**

This program provides a focus for students wishing to work with children aged three through eight. In addition to the following requirements, students must also meet the requirements stated above, in the Program Requirements section of the Post Baccalaureate Diploma (page 202).

**Program Requirements**

EDUC 322-3 The Social Lives of School Children
EDUC 484-4 Early Childhood Education
EDUC 465-4 Children’s Literature

plus a minimum of three courses chosen from the following:

EDUC 311-3 Foundations in Aboriginal Education, Language and Culture
EDUC 315-3 Individual and Developmental Differences in Language Acquisition
EDUC 320-3 Classroom Management and Discipline
EDUC 330-3 Movement Language Elements for Dance in Education
EDUC 341-3 Literacy, Education and Culture
EDUC 367-4 Teaching Children from Minority Language Backgrounds in Elementary Classrooms
EDUC 457-4 Drama and Education
EDUC 459-4 Instructional Activities in Physical Education
EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
EDUC 471-4 Curriculum Development: Theory and Practice
EDUC 473-4 Designs for Learning: Reading
EDUC 475-4 Designs for Learning: Elementary Mathematics
EDUC 477-4 Designs for Learning: Art
EDUC 478-4 Designs for Learning: Music

plus additional upper division credit hours in related topic areas to bring the total to 30 upper division credit hours.

**Post Baccalaureate Diploma in Environmental Education**

This program will be of interest to practicing teachers who want to assist students to develop a greater awareness and understanding of the broadly defined environment. This program encompasses aspects of education in, for, and about the environment. Through selected course work, environmental issues are explored using a multidisciplinary approach and historical and contemporary issues in human-environment interaction as related to diverse curricula.

In addition to the following requirements, students must also meet the requirements stated above, in the Program Requirement section of the “Post Baccalaureate Diploma (General)” on page 202.

Students must complete 30 credit hours as specified below.

All of

EDUC 452-8 Environmental Education
EDUC 493-4 Directed Studies in Environmental Education

plus one of

EDUC 414-4 Designs for Learning: Secondary Social Studies
EDUC 416-4 Designs for Learning: Secondary Science

EDUC 474-4 Designs for Learning: Elementary Social Studies
EDUC 476-4 Designs for Learning: Elementary Science

plus two of

EDUC 311-3 Foundations in Aboriginal Education, Language and Culture
EDUC 433-4 Philosophical Issues in Curriculum
EDUC 437-4 Ethical Issues in Education
EDUC 441-4 Multicultural and Anti-Racist Education
EDUC 471-4 Curriculum Development: Theory and Practice

plus a minimum of six upper division credit hours from the following.

For applicants with an academic background in the humanities/social sciences:

BISC 304-3 Animal Ecology
BISC 310-1 Natural History of BC
BISC 425-3 Biology and Society
EASC 303-3 Environmental Geoscience
EVSC 401-1 Current Topics in Environmental Science
GEOG 449-4 Environmental Processes and Urban Development
REM 311-3 Applied Ecology and Sustainable Environments
REM 412-3 Environmental Modeling
REM 445-3 Environmental Risk Assessment and Management

For applicants with an academic background in the sciences/applied sciences:

ECON 460-3 Seminar in Environmental Economics
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 385-3 Agriculture and the Environment
GEOG 389-3 Human Ecology, Human Relations to Nature
GEOG 449-4 Environmental Processes and Urban Development
HIST 432-3 Problems in Environmental History
SA 326-4 Ecology and Social Thought
SA 371-4 Environment and Society

Additional courses consistent with the aims of the post baccalaureate diploma (PBD) may be substituted for courses in the above list with permission from the Undergraduate Programs office. Students are responsible for prerequisites and other permissions needed to gain entry to courses listed above. Departments sometimes give course enrollment priority to their own students. Because this will reduce access to others, PBD students should consult with faculty and departmental advisors when planning their program.

**Post Baccalaureate Diploma in French and Education**

See “Post Baccalaureate Diploma in French and Education” on page 160.

**Post Baccalaureate Diploma in Special Education**

This program offers educators and healthcare professionals who work with children and adults with disabilities the opportunity to consolidate course work in the area of lifespan development and special education in a way that facilitates a common ground for discussion. Conceptually, the course work emphasizes core knowledge and skills about lifespan development, individual differences, and assessment and support. An emphasis is placed on understanding how challenges presented to families of children with disabilities change over time as children mature and as they make transitions across home, school and community contexts.

**Required Courses (22 credit hours)**

EDUC 315-3 Individual and Developmental Differences in Children’s Language Acquisition
EDUC 422-4 Learning Disabilities
EDUC 426-4 Teaching Children and Youth with Special Needs
EDUC 464-4 Early Childhood Education

plus one of

EDUC 322-3 Social Lives of School Children
GERO 302-3 Health Promotion and Aging
PSYC 361-3 Social Cognition

plus one of

EDUC 424-4 Learning Disabilities Laboratory
EDUC 427-4 Seminar in Teaching Children with High-Incidence

**Optional Courses (8 credit hours)**

EDUC 323-3 Introduction to Counselling Theories
EDUC 351-3 Teaching the Older Adult
EDUC 382-4 Diversity in Education: Theories, Policies, Practices
EDUC 423-4 Helping Relationships
EDUC 428-4 Nature and Nurture of Gifted Students
EDUC 433-4 Philosophical Issues in Education
EDUC 468-4 Cognition and Language in ESL
GERO 300-3 Introduction to Gerontology
GERO 401-3 Aging and the Built Environment
PSYC 354-3 Development of Children’s Thinking
PSYC 355-3 Adolescent Development
PSYC 356-3 Developmental Psychopathology

**Post Baccalaureate Diploma in Teaching English As a Second Language**

See “Post Baccalaureate Diploma in Teaching English as a Second Language” on page 173.

**Co-operative Education**

This program is for qualified students who wish to combine work experience with academic studies. Please note that this program is not part of the Professional Development Program and will not provide the training required for a teaching certificate from the BC College of Teachers. For admission to co-operative education, students must have completed 30 credit hours with a CGPA of 3.0 and have completed EDUC 100-3 Selected Questions and Issues in Education and two of EDUC 220-3 Introduction to Educational Psychology EDUC 230-3 Introduction to Philosophy of Education EDUC 240-3 Social Issues in Education EDUC 260-3 Learning and Teaching Through Technology

Transfer students must complete at least 15 credit hours at Simon Fraser University before applying. Arrangements for work terms are made through the co-op co-coordinator, who should be consulted at least one term in advance. For further details, see “Co-Operative Education” on page 237.

**Field Programs**

8559 Education Building, 778.782.5830 Tel, 778.782.5882 Fax, www.educ.sfu.ca/fp, edprogs@sfu.ca

Director
A.M. MacKinnon, BSc, BEd, MSc (Calg), EdD (Br Col)

Field Programs enhances teacher continuing education through collaboration with other educational agencies in British Columbia. All courses and programs are located at sites other than the
Burnaby Mountain campus or Simon Fraser University Vancouver. Courses offered through Field Programs (designated EDPR) are shown on page 384. Field Programs also offers a graduate diploma in advanced professional studies in education. Field Programs works with associations to co-develop ongoing professional in-service opportunities for teachers, including annual conferences and theme-specific non-credit in-service series.

**Professional Programs**

8531 Education Building, 778.782.4326 Tel, 778.782.8000 Fax, www.educ.sfu.ca/pdp/admissions

**Director**
(to be announced)

Admissions Advisor
Ms. D. Kelso BA (S Fraser), 8624 Education Building, 778.782.3630/3149

**Professional Development Program (PDP)**

Applicants must be attending Simon Fraser University or be admissible. See “Admission and Readmission” on page 17.

- All candidates are required to complete the on-line Professional Development Program application form.
- Candidates who have not attended Simon Fraser University previously, or who have not attended in any of the three terms prior to intended enrollment, must apply for admission or readmission. See “Admission and Readmission” on page 17.
- All applications must be submitted to the PDP admissions office by January 15 for the fall term and May 15 for the spring term.
- All applicants pay the PDP application fee on-line or directly to the PDP admissions office, Faculty of Education.

**Elementary Applicants**

Elementary applicants must, by the date of application, have completed a minimum of 76 credit hours of courses acceptable for credit at Simon Fraser University (should include 16 credit hours of upper division course work) including the following prerequisite courses.

- six credit hours in English (a maximum of three hours of English composition may be included)
- one course (three credit hours) in each of Canadian history, Canadian geography, and laboratory science
- MATH 190
- elementary applicants should have education, fine and performing arts and kinesiology courses

**Secondary Applicants**

Applicants who plan to teach at the secondary level must fulfill the requirements of a teachable major subject or two teachable minor subjects prior to commencing PDP.

**Teachable Majors or Minors**

biology
Canadian studies (minor only)*
chemistry
computing science (minor only)
dance (FPA) (minor only)
earth sciences
English
English and French literatures (joint major)
First Nations (minor only)*
French
French, history and politics (joint major)*
geography*history
humanities (minor only)*
kinesiology

**mathematics**

music (FPA) physics social studies* theatre (FPA) (minor only) visual art (FPA)

*see requirements sheet in the Faculty of Education

Students planning to teach at the secondary level must complete degree requirements prior to commencing PDP, except BEd candidates who cannot complete their degree until they have successfully completed PDP. These BEd candidates must complete the requirements of one teachable major or two teachable minors prior to commencing PDP. Students from other institutions may apply prior to degree completion, but must have completed the degree one full term prior to commencing PDP.

Secondary applicants must complete six English credit hours (a maximum of three hours of English composition may be included) one full term prior to starting PDP.

Secondary applicants are encouraged to have education courses.

**All Applicants**

- A minimum of two reference letters, and no more than three (one should describe the candidate's experience in teaching/instructional related functions) must be submitted.
- A written assignment (described further on the PDP website) is required.
- A resumé must also be submitted by all applicants (see PDP website for information).
- Before program admission, applicants must demonstrate competence in written and oral English (and written and oral French for French immersion and French as a second language programs).
- Students may be asked to submit evidence of good health before being considered for admission.
- Students may be required to have an interview before being considered for program admission.
- If the number of PDP applicants exceeds facilities, students and staffing capabilities, the admissions committee will select the best qualified candidates.
- Admission selection is generally given to students whose applications show experience with and commitment to community service that may include teaching or other helping roles.
- Given the number of well qualified applicants to the professional development program each year, it is most improbable that candidates who have been unsuccessful in four previous competitions will be considered favorably in any subsequent competition. Those who have been unsuccessful in gaining program entry on at least four occasions are discouraged from further application.

**Program Description**

The professional development program is three terms in duration. Professional studies and activities are arranged in the following sequence.

**First Term of Professional Development Program**

EDUC 401-8 Introduction to Classroom Teaching* EDUC 402-7 Studies of Educational Theory and Practice*

*not offered in summer term

EDUC 401 and 402 are offered as an integrated program, combining theory and practice in both on campus seminars and in-school practice in the first term of PDP. This is accomplished by alternating blocks of classroom teaching with workshops and instruction on campus.

During EDUC 401, students are assigned to a teacher (school associate) identified by school authorities and supervised by a faculty associate appointed by the University. Students observe, teach and participate in school routines and programs.

During EDUC 402, students participate in the study of teaching, learning to make meaning of the complex world of educational practice, informed by extensive study of pedagogical literature.

French Education
French immersion, programme cadre and basic French for kindergarten to grade 12 are normally available. The majority of the program in immersion and programme cadre is in French.

**Special Focus Modules**

Special focus modules are offered during fall and spring terms. Entry may be competitive.

**EDUC 405-15 Teaching Semester**

(Not offered in summer term) Prerequisites: EDUC 401 and 402.

A term of classroom experience supervised by University appointed faculty associates. The school placement is appropriate to the educational level and subject specialties in which the student expects to obtain certification. Students assume a large measure of responsibility and participate in a wide range of teaching and supervisory activities.

School placements in EDUC 405-15 are made in school districts throughout the Lower Mainland.

Grading in EDUC 401, 402 and 405 is on a pass/withdrawal basis.

**EDUC 404-0 Course Work Semester**

Prerequisites: EDUC 401 and 402.

Course programming in this term is in consultation with undergraduate programs, faculty members, and the student's faculty associate to ensure that professional, academic and certification requirements are satisfied or to satisfy the educational requirements of designated PDP modules. Students undertake 15 credit hours of studies in education.

**Note:** Students completing degrees from the Faculties of Applied Sciences, Arts, Business Administration or Science may apply credit for EDUC 404 towards that degree.

To be recommended for certification, the student must achieve in EDUC 404 a GPA at least equivalent to that required for a degree in the University.

**General Regulations**

Students must complete normal Simon Fraser University enrollment procedures before commencing studies in any term of the professional development program.

Students must meet program goals, as outlined in the Professional Development Handbook.

- This program is normally completed in three consecutive terms. However, those with valid reasons may be given permission by the professional programs director to interrupt their program participation. A formal request must be submitted in writing to the director.
- A program interruption requested by a student may normally last no longer than two years.
- Students who indicate their intention to undertake a given term of the professional development program and who do not honor this commitment are considered to have withdrawn from the program. Permission to re-enter is not given automatically.

**Readmission**

Students who withdraw from EDUC 401/402 must re-apply to the admissions committee.

Students may apply for EDUC 405 re-entry by completing a re-entry application and submitting it and supporting documents to the professional programs director. Deadlines for re-application: April 15 for fall term; October 15 for spring term.

Permission to re-enter the program will be granted if...
• the student has satisfactorily met the conditions for re-entry established when he/she interrupted or withdrew from the program
• space is available in the term for which the student applies

Note: After being withdrawn from EDUC 405 for a second term, a student may not re-enter the program unless by appeal.

Students who re-enter PDP should apply for re-entry within two years of withdrawal. Students who do not re-enter within the specified time may be required to complete additional course work before readmission.

Students who wish to re-enter EDUC 404 must apply to re-enter the program not later than six weeks prior to the beginning of the term. An application for re-entry to PDP must be completed.

Recommendation for Certification

The academic and professional records of all students who have completed the three professional development program terms will be subject to review by the faculty before a recommendation for certification is forwarded to BCCT.

PDP students may be required to complete a criminal record check prior to or during PDP.

Special Professional Program Opportunities

EDUC 405-15 Course Challenge

Students with a minimum of one year of full-time teaching experience in Canada or in a school setting where English or French was the normal language of instruction, and where the curriculum was reasonably similar to a Canadian public school curriculum, may challenge EDUC 405 subject to the following:

• Course challenge applicants will be considered according to generally established requirements and procedures. See “Course Challenge” on page 32.

• Normally, students can register in course challenge for EDUC 405 only while registered in EDUC 401/402. Additional full fees will be levied for challenging EDUC 405 regardless of whether the challenge is successful.

• Course challenge credit for EDUC 405 will not be granted before successful completion of EDUC 401/402.

• Application forms are available from the director of professional programs and must be submitted by: May 15 for the fall term; September 15 for the spring term.

External Professional Development Programs

External Programs Admissions Advisor
Ms. C. Keung BMus, BEd (Br Col), 8631.2 Education Building, 778.782.6625 Tel

There are two external professional development programs that operate under the auspices of a consortia of local community colleges, northern school districts and Simon Fraser University. The consortia invite applicants with strong local northern connections. (Deadlines and admission procedures are different from the Lower Mainland application.)

AHCOTE – Alaska Highway Consortium on Teacher Education (Fort St. John, Dawson Creek) (subject to funding) Telephone 1.250.785.6891 local 2095 for information.

Professional Qualification Program (PQP)

This is a three term (36 credit hour) program leading to a Certificate in Professional Practices for those who wish to recently their teaching credentials.

Admission

PQP applicants must be admissible to Simon Fraser University. Those who have never attended here, or who have not attended in any of the previous three terms prior to their intended enrollment, must apply for university admission (http://students.sfu.ca). See “Admission and Readmission” on page 17.

PQP applicants must also provide the Professional Programs admissions office with a letter from the BC College of Teachers stating that they have been recommended for enrolment in PQP or a similar program.

Applications, sent to the admissions office of the Faculty of Education's Professional Programs, are due by September 15. An interview is required.

Requirements

First Term

EDUC 352-2 Building on Reflective Practice
EDUC 483-8 Designs for Learning: Curriculum Studies

Second Term

EDUC 401-8 Introduction to Classroom Teaching
plus one additional upper division EDUC course (at least four credit hours) selected by the student and approved by the director of PDP or designate

Third Term

EDUC 406-12 Supervised Observation and Teaching

Upon successful completion of the first two terms, students will then have satisfied the BC College of Teachers (BCCT) familiarization and methodology requirement for the certification of foreign trained teachers. Upon approval of the director of professional programs, PQP students may then enter EDUC 406, and upon satisfactory completion of that course, will meet the BCCT’s practicum requirement for the certification of foreign trained teachers.

PQP students who complete all 36 credit hours will also have met the requirements for the Certificate in Professional Practices (see below).

In exceptional circumstances, the student’s faculty associate and the PQP co-ordinator may recommend to the professional development program director that the student complete EDUC 406 after completion of the first 12 credit hours of PQP. In this case, the student does need to complete the second term of course work. It is recommended, however, that students complete at least eight credit hours in Designs for Learning courses (EDUC 412, 414-416, 430, 472-483, 485) to enhance their classroom skills.

Certificate in Professional Practices

Ms. C. Keung BMus, BEd (Br Col), 8631.2 Education Building, 778.782.6625 Tel

This certificate offers either foreign trained teachers or previously credentialed Canadian teachers the opportunity to upgrade teaching skills to current practices. By completion of the appropriate education courses and opportunities for guided practice, the student will: be provided appropriate contextual perspectives on teaching in British Columbia; become acquainted with contemporary school practices; and develop practical skills to the standards of the British Columbia College of Teachers (BCCT).

Program Requirements

To qualify for the credential, students must complete, within five years, either the Professional Qualification Program (PQP) requirements for foreign trained teachers (see “Professional Qualification Program (PQP)” on page 205) or complete the HEART (Helping Ease Access for Returning Teachers) requirements of the EDUC 406 practicum, and complete an additional three upper division Education courses (12 credit hours).

Students must be admitted to the Professional Qualification Program or HEART teacher education module to qualify for the certificate.

Students must achieve a minimum 2.0 GPA, calculated on all Simon Fraser University courses applied to the program, with the exception that duplicate courses are counted only once.

HEART (Helping Expand Access for Returning Teachers)

EDUC 406-12 (HEART) Supervised Observation and Teaching

This EDUC 406 option within professional programs is a supervised orientation/observation and teaching sequence of about 12 weeks in a BC public school. This practicum offers educators, who do not meet BC certification requirements, an opportunity to familiarize themselves with the BC school system and to update teaching skills to acquire certification.

EDUC 406 is normally offered in the fall and spring terms only and space is limited.

Grading is on a pass/withdraw basis.

Applicants to HEART must be attending Simon Fraser University or be admissible to the University. See “Admission and Readmission” on page 17.

Candidates who have attended Simon Fraser University previously, or who have not attended in any of three terms prior to intended enrollment in EDUC 406, must submit the application for undergraduate admission form to Student Services. Students intending to complete Simon Fraser University courses in preparation for application to EDUC 406 should contact the faculty (8675.3 Education Building, telephone 778.782.6625).

Application forms for the HEART program should be received by: April 15 for fall term; September 15 for spring term. An interview is normally required.

Certification

Simon Fraser University does not confer teaching certificates. The BC College of Teachers (BCCT) is the only body in BC authorized to grant such certificates. Under July 1, 1974 regulations, qualified students from provincial universities, upon making application and submitting birth or baptismal certificate as proof of name and age, will receive a non-expiring teaching credential.

Note: Persons convicted of a criminal offence and considering a teaching career should write to the BCCT for clarification of their status before undertaking a teacher education program.

Types of Certificates

There are two types of teaching certificates. The standard certificate is awarded after successful completion of an acceptable four year program. Included in the acceptable four year program are both academic and professional studies. The professional certificate is awarded after successful completion of an acceptable five year program of professional and academic studies culminating in a degree.

The standard certificate requires a minimum of 76 credit hours (five terms) in applied sciences, arts, business administration, science, or education, plus professional studies. The professional certificate requires a minimum of 120 credit hours and professional education (a maximum of three hours of English composition may be included).
• effective September 1, 2000, students must meet the BC College of Teachers acceptable degree policy restricting the academic preparation acceptable for qualifying teachers. Contact the Faculty of Education for further information.

Applying for a Certificate
The Faculty of Education sends the BCCT a list of students who have completed teacher certification requirements. Each student is given or mailed an application for teacher’s certificate of qualification form. Students must forward the completed form to BCCT for formal evaluation for certification.

Applications for certificate upgrading (e.g., when a teacher wishes to convert a standard certificate to a professional certificate) must also be made to BCCT.

Note: There is a delay between the completion of the professional development program and the forwarding to the BCCT of documented recommendation for a teaching certificate.

Applicants for certification upon degree completion should note the University regulations in this Calendar concerning final deadlines for submission of graduation applications. Exceptions cannot be made.

Teacher Qualification Service
This service is sponsored jointly by the BC Teachers’ Federation and the BC School Trustee’s Association and is an advisory service to teachers and school boards in evaluating the academic and professional preparation of teachers. At present, the service assists teachers who are newly certified, new to a school district, or who are upgrading their certificates. Evaluation forms are available from the Teacher Qualification Service, 106-1525 West 8th Avenue, Vancouver, BC, V6T 1T5, or from the PDP admissions office, Faculty of Education, Simon Fraser University.
Faculty of Health Sciences

1000 East Academic Annex, 778.782.4821 Tel, 778.782.5927 Fax, www.fhs.sfu.ca, fhs@sfu.ca

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M. Morrow BA (Br Col), MA, PhD (Tori)
R. Tucker BA (McG), MHS (Tori), PhD (Harv)
L. Zeng BSc (Nankai, China) MSc, PhD (Wat)**

Associated Faculty
B. Brandhorst, Molecular Biology and Biochemistry
F. Brinkman, Molecular Biology and Biochemistry
D. Cohn, Political Science
R. Corrado, Criminology
D. Culhane, Sociology and Anthropology
A. Davison, Kinesiology
M. Ester, Computing Science
D. Finegood, Kinesiology
J. Graham, Statistics and Actuarial Sciences
G. Gutman, Gerontology
N. Hauenerland, Biological Sciences
M. Howard, Political Science
J. Hu, Statistics and Actuarial Sciences
G. Jaroci, Psychology
D. Kaufman, Education
S. Lear, Kinesiology
L. Lemare, Education
R. Lockhart, Statistics and Actuarial Sciences
C. Lovenberger, Biological Sciences
C. MacDonald, Health Studies
S. MacLean, Political Science
B. McNeney, Statistics and Actuarial Sciences
N. Oleviler, Economics
A. Parameswaram, Engineering Science
W. Parkhouse, Kinesiology
C. Patton, Sociology and Anthropology, Women’s Studies
S. Pigg, Sociology and Anthropology
M. Pinto, Vice President Research
A. Rawicz, Engineering Science
S. Robinovitch, Kinesiology
N. Schuurman, Geography
G. Tibbits, Kinesiology
D. Weeks, Psychology
A. Wister, Gerontology
*joint appointment with molecular biology and biochemistry
**Joint appointment with statistics

Advisor
Ms. L Hegland BGS (S Fraser), 1203 East Academic Annex, 778.782.7188, hegland@sfu.ca

Undergraduate Degrees Offered
Bachelor of Arts
Bachelor of Science

Bachelor of Science

The Bachelor of Science in Health Sciences incorporates multi-disciplinary approaches to the study of health, illness and disease in human communities. The programs focus on the determinants of health, health promotion and disease prevention, health care systems, health policy and health technology. It features work that joins the biological, social, behavioral and policy sciences.

Bachelor of Arts Degree Program

Major Program
A Faculty of Health Sciences bachelor of arts degree requires 120 credit hours including at least 45 in the upper division. The University’s writing, quantitative, and breadth requirements (WQB) must also be met (see “Writing, Quantitative, and Breadth Requirements” on page 7).

Lower Division Requirements
Students complete all of
HSCI 100-3 Human Biology
HSCI 130-3 Foundations of Health Sciences and one of
STAT 201-3 Statistics for the Life Sciences
STAT 203-3 Introduction to Statistics for the Social Sciences and one of
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology and all of
HSCI 211-4 Perspectives on Cancer, Cardiovascular and Metabolic Diseases
HSCI 212-4 Perspectives on Immunological, Infectious and Immunological Diseases
HSCI 214-4 Perspectives on Mental Health and Illness
HSCI 215-4 Perspectives on Disability and Injury

and at least one of
HSCI 110-3 Perceptions and Misperceptions of Common Health Risks
HSCI 120-3 Introduction to Human Sexuality and Sexual Health
HSCI 140-3 Complementary and Alternative Medicine
HSCI 150-3 Current Topics in Sexuality
HSCI 160-3 Global Perspectives on Health
HSCI 199-3 Special Topics in Health

Upper Division Requirements
Students complete all of
STAT 302-3 Analysis of Experimental and Observational Data
HSCI 303-3 Perspectives on Behavioural Risks
HSCI 304-3 Perspectives on Environment
HSCI 305-3 The Canadian Health System
HSCI 307-3 Research Methods in Health Sciences
HSCI 319-3 Applied Health Ethics
HSCI 330-3 Exploratory Strategies in Epidemiology
HSCI 340-3 Social Determinants of Health

and one of
HSCI 481-3 Senior Seminar in Social Health Science
HSCI 482-3 Senior Seminar in Infectious Diseases
HSCI 483-3 Senior Seminar in Environmental Health

plus a minimum of five additional upper division courses related to the major, including at least nine HSCI credit hours, one approved methods course and two prerequisite courses for the chosen senior seminar (a list of possible course choices is available from the advisor).

Honors Program
Honors students complete at least 132 credit hours including the major program requirements plus an honors thesis (all of HSCI 490, 491, 492) which is based on independent research under the direction of a faculty member. A 3.0 CGPA and an upper division 3.0 GPA is required. Students who obtain both a program and graduation GPA of 3.5 are eligible for the designation first class.

Minor Program
Students will complete all of
HSCI 211-4 Perspectives on Cancer, Cardiovascular and Metabolic Diseases
HSCI 212-4 Perspectives on Immunological, Infectious and Immunological Diseases
HSCI 214-4 Perspectives on Mental Health and Illness
HSCI 215-4 Perspectives on Disability and Injury

plus at least 15 upper division HSCI credit hours.

Bachelor of Science Degree Program

This program incorporates basic science courses (biology, chemistry, molecular biology and statistics) with health and disease courses from the health sciences core. Building on a solid base of basic biomedical and applied health science, students will receive advanced training in pharmacology, pathophysiology and epidemiology, as well as molecular biology and genetics.

Major Program
This bachelor of science degree requires 120 credit hours consisting of 93 credit hours of required and elective courses, prerequisite courses, plus other electives to meet the University’s writing, quantitative and breadth (WQB) requirements (see “Writing, Quantitative, and Breadth Requirements” on page 7).

Lower Division Requirements
Students must complete all of
BISC 101-4 General Biology I
BISC 102-4 General Biology II
BISC 202-3 Genetics
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
HSCI 130-3 Foundations of Health Science
HSCI 211-4 Perspectives on Cancer, Cardiovascular and Metabolic Diseases
HSCI 212-4 Perspectives on Immunological, Infectious and Parasitic Diseases
HSCI 214-4 Perspectives on Mental Health and Illness
HSCI 215-4 Perspectives on Disability and Injury

MBB 221-3 Cellular Biology and Biochemistry
MBB 222-3 Biochemistry and Molecular Biology

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and one of
STAT 201-3 Statistics for the Life Sciences
STAT 203-3 Introduction to Statistics for the Social Sciences

Recommended Electives
KIN 105-3 Fundamentals of Human Structure and Function
KIN 142-3 Introduction to Kinesiology
MATH 154-3 Calculus I for the Biological Sciences
PHYS 101-3 Physics for the Life Sciences I
PSYC X99-3 Brain, Mind and Society

Upper Division Requirements
Students must complete all of
HSCI 319-3 Applied Health Ethics
HSCI 322-4 Introduction to Pathophysiology
HSCI 323-3 Principles of Pharmacology and Toxicology
HSCI 330-4 Exploratory Strategies in Epidemiology
MBB 308-3 Molecular Biology and Biochemistry Lab I
MBB 331-3 Molecular Biology
STAT 302-3 Analysis of Experimental and Observational Data
and one of
HSCI 441-4 Virology Laboratory
HSCI 442-4 Immunology Laboratory
HSCI 443-4 Environmental Health Toxicology Laboratory
and one of
HSCI 482-3 Senior Seminar in Infectious Diseases
HSCI 483-3 Senior Seminar in Environmental Health Science
and a minimum of three additional upper division courses related to the student's major. These must include at least six HSCI credit hours and two prerequisite courses for the chosen senior seminar course (a listing of possible course choices is available from the advisor). HSCI 305 is recommended.

Honors Program
A 3.0 cumulative grade point average (CGPA) and a 3.0 upper division grade point average is required. Students must complete at least 132 credit hours and meet all the requirements for the major program. Also required is an honors thesis (all of HSCI 490, 491, 492), based on independent research under the direction of a faculty member. Those who obtain both a program and graduation 3.5 GPA are eligible for the designation 'first class.'

Minor Program
Students must complete all of
HSCI 211-4 Perspectives on Cancer, Cardiovascular, and Metabolic Diseases
HSCI 212-4 Perspectives on Infectious and Immunological Diseases
HSCI 214-4 Perspectives on Mental Health and Illness
HSCI 215-4 Perspectives on Disability and Injury
Students must also complete at least 15 upper division HSCI credit hours.

Co-operative Education
Co-operative education is available beginning in the 2007 fall term.
Faculty of Science

For students enrolled at the University before fall 1991
• a graduation GPA of 2.00 calculated on the required 120 credit hours, or on the last 60 credit hours taken including the 44 credit hours of upper division credit
• a 2.00 GPA in the required upper division courses

For students enrolled at the University before fall 2006
• a minimum of 12 credit hours in subjects taken outside the Faculty of Science (excluding EDUC 401 to 407) including six credit hours minimum taken in the Faculty of Arts and Social Sciences are required

Honors Program
This program provides in-depth study in a single field and requires the student to concentrate his/her studies in the fifth to eighth levels in the chosen field. It is recommended for those intending to proceed to advanced degrees provided they meet the entrance requirements and maintain the required standing. Students applying for honors program admission will normally have a cumulative grade point average of 3.00 (B standing) and are expected to maintain this standard to continue in the honors program.

Requirements for Honors and Honors First Class
Students must complete 132 credit hours including
• a minimum of 48 upper division credit hours in one subject area
• additional upper division credit hours to total to a minimum of 60 credit hours of upper division credit
• all undergraduate students enrolling in September 2006 and thereafter must fulfill the new curriculum writing, quantitative and breadth requirements
• a program cumulative grade point average (CGPA) minimum of 3.00 must be obtained on the overall course work requirements for the major program, as well as a minimum program grade point average of 2.00 in the upper division courses required in the major program. (See “Student Appeals” on page 36 of the General Regulations section regarding graduation GPA requirements on all course work taken at Simon Fraser University.) Honors students who obtain both a program and a graduation minimum GPA of 3.5 are eligible for the designation first class. Students must also complete additional requirements as specified by the honors and in the General Information section (see page 6).

Program Guidelines
• At the outset, students are requested to indicate their intended major so as to facilitate counselling.
• Students who have not determined a major or intend to transfer to a professional school (i.e., medicine, dentistry, optometry or veterinary medicine) are required for transfer credit, application for transfer credit and a bachelor’s degree through Simon Fraser University. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program.
• Normally, the graduation requirements, as published in the Calendar at the time of formal declaration of major or honors, will apply.
• In any combination of science programs (honors/minor, major/major, major/minor, minor/minor) the student may not use the same upper division course for formal credit hours towards both programs. One course might fulfil content requirements of different areas, but in such a case additional replacement credit hours in upper division work satisfactory to one of the departments or program committees must be taken in one of the subjects to fulfill overall credit for the two programs.
• Programs totalling more than 18 hours of credit per term require the approval of the dean.

Undergraduate Degrees Offered
Bachelor of Science (Honors)
Bachelor of Science

Diplomas and Certificates Offered
Certificate in Actuarial Mathematics
Certificate in Forestry Geoscience
Post Baccalaureate Diploma in Biological Sciences

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
This program provides a broad education in several fields and some specialization in one field known as the major. Optional programs, including double majors or majors and minors, are possible. General regulations are in Faculty of Science requirements for the BSc (major). For specific requirements, see the academic department concerned. Students not pursuing a specialization may undertake a general science program. See “General Science Program” on page 220 for information. For more information, see www.sfu.ca/ugcr.

Requirements for Major
Students must complete 120 credit hours including
• a program cumulative grade point average (CGPA) minimum of 2.00 must be obtained on the overall course work requirements for the major program, as well as a minimum program grade point average of 2.00 in the upper division courses required in the major program. (See “Student Appeals” on page 36 of the General Regulations section regarding graduation GPA requirements on all course work taken at Simon Fraser University.) Honors students who obtain both a program and a graduation minimum GPA of 3.5 are eligible for the designation ‘first class.’ Students must also complete additional requirements as specified by the honors and in the General Information section (see page 6).

Program Guidelines
• At the outset, students are requested to indicate their intended major so as to facilitate counselling.
• Students who have not determined a major or intend to transfer to a professional school (i.e., medicine, dentistry, optometry, or veterinary medicine) are required for transfer credit, application for transfer credit and a bachelor’s degree through Simon Fraser University. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program. Candidates must apply for transfer credit in a major or honors program.
• Normally, the graduation requirements, as published in the Calendar at the time of formal declaration of major or honors, will apply.
• In any combination of science programs (honors/minor, major/major, major/minor, minor/minor) the student may not use the same upper division course for formal credit hours towards both programs. One course might fulfill content requirements of two related areas, but in such a case additional replacement credit hours in upper division work satisfactory to one of the departments or program committees must be taken in one of the subjects to fulfill overall credit for the two programs.
• Programs totalling more than 18 hours of credit per term require the approval of the dean.

Minor Program
Consult advisors in appropriate departments for course selection. Suggested programs and prerequisites are shown in each department’s section. An average 2.00 grade point is required in those upper division courses used to satisfy the requirements for a minor.

General Science Program
This program, consisting of 120 credit hours, provides a broad education in several fields with some specialization in at least two. It requires two minors, one of which must be chosen from within the Faculty of Science. The groupings of courses from which the two minors can be chosen are given under the General Science Program section (page 220), along with the general course requirements for this degree. It should be noted that all lower division requirements for the two chosen minors must also be completed.

Co-operative Education Programs
These programs are available in all programs including biological sciences, chemistry, earth sciences, environmental science, geography, mathematics, molecular biology and biochemistry, physics, and statistics and actuarial science. Details are given in the departmental sections and in “Co-operative Education” on page 237. Students are encouraged to take the co-op option.

Withdrawal of Program Approval
A student whose progress, in the judgment of the department, is below the standard for graduation from a program may be refused entry to, or required to withdraw from, that program in the department.

Transfer Credit and Bachelor of Science Degrees for Students Who Successfully Complete First Year Medical Science Professional Training
Students who complete at least 90 credit hours in a science degree program and are accepted into an accredited professional program in medicine, dentistry, optometry or veterinary medicine are eligible for a Simon Fraser University bachelor of science degree after successful completion of the first professional study year. To be acceptable, courses taken in the professional program must not duplicate those already taken at Simon Fraser University and must be acceptable for transfer credit in a major or honors program. Candidates must apply for transfer credit and a bachelor’s degree through Simon Fraser University. Since official transcripts of the work completed in the first year of the professional program are required for transfer credit, application for
Breadth-Science Courses for Non-specialists

The following courses may be taken to fulfill science Breadth requirements. They are specifically designed for those not specializing in pure or applied science and will introduce historical and contemporary perspectives on various scientific disciplines.

BISC 110-3 The Evolution and Diversity of Life on Earth
BISC 111-3 ST: Current Topics in Biology I
BISC 112-3 ST: Current Topics in Biology II
CHEM 191-3 Living in a Materials World: From the Stone Age to Nanoscience
CHEM 192-3 Chemistry in Your Home, Work and Environment
CHEM 193-3 Close Encounters of the Radiative Kind
EASC 103-3 The Rise and fall of the Dinosaurs
EASC 104-3 Geohazards: The Earth in Turmoil
EASC 106-3 Earth Through Time
MATH 160-3 Mathematics in Action
MATH 178-3 Fractals and Chaos
MATH 310-3 Genes, Biotechnology and Society
PHYS 190-3 Introduction to Astronomy
PHYS 192-3 Logarithm and Blues
SCI 300-3 Science and Its Impact on Society
STAT 100-3 Chance and Data Analysis

Department of Biological Sciences

B2855 Shrum Science Centre, 778.782.4475 Tel, 778.782.3496 Fax, www.sfu.ca/biology

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T. Finlayson BA (Tor), LL (S Fraser)
F.J.F. Fisher BSc, MSc (Cant), PhD (NZ)
J.A. Mackauer DPhil (East), FESC
B.A. McKeown BSc (Br Col), PhD (S Fraser)
J.E. Rahe BSA, PhD (Purdue)
L.M. Srivastava BSc, MSc (Ald), PhD (Calif)
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L.M. Villarreal AB, PhD (San Francisco), PhD (Stan)
J.M. Webster BSc, DSc, PhD (Lon), ARCS, DIC

Professors
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L.I. Bennett-Young BSc, PhD (Tor)
I.M. Cote BSc (McG), MSc (Alta), PhD (Tor)
B.J. Crespi BSc (Chic), PhD (Mich)
L.M. Dill BSc, MSc, PhD (Br Col)
G.J. Gries Diplom, PhD (Gött), NSERC Industrial Research Chair
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N.H. Hauenerland Diplom, PhD (Mün)
R.W. Mathewes BSc (S Fraser), PhD (Br Col)
M.M. Moore BSc, PhD (Br Col)
Z.K. Punja BSc (Br Col), M.S, PhD (Calif), Burnaby Mountain Endowed Chair
J.D. Reynolds BSc (Tor), M Sc (Qu), PhD (Tor), Tom Buell BC Leadership Chair in Salmon Conservation and Management
B.D. Rolffberg BSc (S Fraser), MSc (Br Col), PhD (Mass)
T.D. Williams BSc (Exe), PhD (Brist)
M.L. Winston BA, MA (Boston), PhD (Kansas)
R.C. Ydenberg BSc (S Fraser), DPhil (Oxf)

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F. Breden BA (S Florida), MS (Georgia), PhD (Chic)
E. Elle BSc, MA (New York), PhD (Rutgers)
D.J. Green BSc (Sus), MSc (S Fraser), PhD (ANU)
M.W. Hart BSc (Ata), MSc (Dal), PhD (Wash)
H. Hutter BSc (L. Maximilians), PhD (M. Planck Inst)
C.J. Kennedy BSc, PhD (S Fraser)
L.F.W. Lesack BSc (Man), PhD (Calif)*
C.A. Lowenberger BSc (Guelph), MPM (S Fraser), PhD (McGill)
R.A. Nicholson BSc, PhD (S’ton)
A.L. Plant BSc, PhD (Not)

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J.K. Christians BSc (Trent), PhD (S Fraser)
PhD (McG), Canada Research Chair
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A.R. Moores BSc (McG), DPhil (Oxf)
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W. Palen BA (Virginia), PhD (Wash), Canada Research Chair
E. Palsson, CandMag (Oslo), MA, PhD (Princ)
G.L.L. Rintoul BSc(W’Ont), PhD (Br Col)
M.A. Silverman, BSc (N Illinois) PhD (Denver)

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R.W. Butler BSc, MSc (S Fraser), PhD (Br Col)
D. Eisler BSc (Northland), MSc (Texas A&M), PhD (Oregon State)
P. Gallagher BSc (Br Col), BEd, PhD (S Fraser)
D. Gillespie BSc, MSc, PhD (S Fraser)
M. Goetter BSc (C’dia), MSc (Ott), PhD (Alta)
D.B. Lank BS (Marl), MS (Minn), PhD (Cornell)
B. Smith BSc (New Br), MSc (Dai), PhD (Br Col)
I.R. Walker BSc (M’dall), MSc (Wat), PhD (S Fraser)

Associated Faculty
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C. Crawford, Psychology
B. Galdikas, Anthropology
R. Peterman, Environment and geographical Management
L.M. Quarby, Molecular Biology and Biochemistry
R. Routledge, Statistics and Actuarial Science
J. Sharp BA (Sus), MSc (Sus), PhD (Br Col)

Senior Lecturers
M. Fernando BSc (S’lanka), MSc, PhD (Br Col)
I. Mladenovic BSc, MSc, PhD (Belgrade)
J. Sharp BA, BSc (McG), MSc (Br Col)
C. Thong BSc (Sing), PhD (S Fraser)
D.R. Wilson BSc, MSc (S Fraser)

Lecturers
K. Fitzpatrick MSc (Br Col), PhD (S Fraser)
T. McMillan BSc, MPM (S Fraser)
S.F. Brosco BSc (Wat), PhD (McG)*

Lab Instructors
P. Hollmann BSc (Vic, BC), MSc (S Fraser)

Undergraduate Advisor
Ms. E. Kirkwood BSc (S Fraser), MBA (City University, Vancouver), undergraduate program advisor, BB270 Shrum Science Centre, 778.782.3339, ekirkwoo@sfu.ca

"Joint appointment with geography"
"Joint appointment with molecular biology and biochemistry"

Programs offered include: major, honors, minor; environmental toxicology minor, post baccalaureate diploma. Co-operative education is available to students in major and honors programs.

Academic Advising
Biological sciences majors should contact an advisor before enrollment.

Field Schools
International field schools are offered in a range of areas, e.g. African studies, tropical biology or marine ecology. Students interested in taking field courses at an outside accredited institution for possible transfer credit should consult with the advisor.

Minimum Grade Requirement
A grade of C- or better is required on all prerequisite BISC and MBB courses.

Prerequisites
Entry into courses numbered 300 and above normally requires completion of the lower division core in Biological Sciences. Prerequisites for any course may be waived with the approval of the department.

Designated Breadth in Science Courses
Several BISC courses are available for non-majors to earn designated breadth in science (DB-Sci) credit. Included in the list are BISC 101 and 102. These courses are available for DB-Sci credit but primarily deliver prerequisite information to BISC and science majors in related departments. Students in the Faculty of Arts and Social Sciences are encouraged to earn their DB-Sci credit hours in other BISC breadth courses (e.g. BISC 110, 111 and 112).

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative, and Breadth Requirements" on page 7 for information.

Major Program
All biological sciences majors should normally complete the lower division core requirements within the first 60 credit hours (four terms), and maintain a minimum 2.00 GPA in these courses. BISC majors are encouraged to choose their stream upon completion of the lower division core. Students who have had more than five course repeats are normally not permitted to remain in the program. Direct entry to the BISC major upon acceptance to the University is possible if Faculty of Science criteria is met.

Basic credit hour requirements underlying all areas of emphasis follow.

<table>
<thead>
<tr>
<th>BISC/MBB (lower division)</th>
<th>20 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>non BISC/MBB (lower division)</td>
<td>27 credit hours</td>
</tr>
<tr>
<td>*electives</td>
<td>36 credit hours</td>
</tr>
<tr>
<td>total (minimum)</td>
<td>120 credit hours</td>
</tr>
<tr>
<td>*see &quot;Requirements for Major&quot; on page 209</td>
<td></td>
</tr>
</tbody>
</table>

Lower Division Core

<table>
<thead>
<tr>
<th>BISC 101-4 Introduction to Biology</th>
<th>BISC 102-4 Introduction to Biology</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 202-3 Genetics</td>
<td>BISC 204-3 Introduction to Ecology</td>
</tr>
<tr>
<td>CHEM 121-4 General Chemistry and Laboratory I</td>
<td>CHEM 122-2 General Chemistry II</td>
</tr>
<tr>
<td>CHEM 281-4 Organic Chemistry and Laboratory I</td>
<td>CHEM 282-2 Organic Chemistry II</td>
</tr>
<tr>
<td>MBB 221-3 Cell Biology and Biochemistry</td>
<td></td>
</tr>
</tbody>
</table>

MBB 222-3 Molecular Biology and Biochemistry
STAT 201-3 Statistics for the Life Sciences

and one of

<table>
<thead>
<tr>
<th>MATH 151-3 Calculus I</th>
<th>MATH 154-3 Calculus I for the Biological Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 152-3 Calculus II</td>
<td>MATH 155-3 Calculus II for the Biological Sciences</td>
</tr>
<tr>
<td>PHYS 101-3 General Physics I</td>
<td>PHYS 102-3 Mechanics and Modern Physics</td>
</tr>
<tr>
<td>PHYS 125-3 Mechanics and Special Relativity</td>
<td>PHYS 140-4 Studio Physics – Mechanics and Modern Physics</td>
</tr>
<tr>
<td>PHYS 102-3 General Physics II</td>
<td>PHYS 123-1 Optics and Magnetism</td>
</tr>
<tr>
<td>PHYS 126-3 Electricity, Magnetism and Light</td>
<td>PHYS 141-4 Studio Physics – Optics, Electricity and Magnetism</td>
</tr>
</tbody>
</table>

Students are encouraged to take a full year of organic chemistry. Medical, dental or veterinary school applicants should include all CHEM courses above.

Upper Division Requirements and Electives

All biological sciences majors will complete a minimum of 12 upper division BISC/MBB courses. The following two courses form an upper division core required by all BISC major/honors students.

| BISC 300-3 Evolution | BISC 333-3 Developmental Biology |

All students must complete at least one physiology course from the following

| BISC 305-3 Animal Physiology | BISC 366-3 Plant Physiology |

and at least one organism lab course from the following

<table>
<thead>
<tr>
<th>BISC 303-4 Microbiology</th>
<th>BISC 306-4 Invertebrate Biology</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 316-4 Vertebrate Biology</td>
<td>BISC 317-3 Insect Biology</td>
</tr>
<tr>
<td>BISC 326-3 Biology of Algae and Fungi</td>
<td>BISC 337-4 Plant Biology</td>
</tr>
<tr>
<td>BISC 416-4 Fish Biology</td>
<td>BISC 418-3 Parasitology</td>
</tr>
</tbody>
</table>

Students should choose remaining requirements in an area of specialization. Four biology streams are offered: cell and molecular biology, integrative biology, ecology and evolution and an open stream. The open stream provides broad biological training, or may be used to specialize in an area not offered by the main streams (consult the undergraduate program advisor, individual faculty, or department website for advice on other areas of specialization). The course requirements for each stream are as follows.

Cell and Molecular Biology

Students must complete five stream specific courses from the following

<table>
<thead>
<tr>
<th>BISC 302-3 Genetic Analysis</th>
<th>BISC 303-4 Microbiology*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 357-3 Gene Cloning*</td>
<td>BISC 403-3 Current Topics in Cell Biology*</td>
</tr>
<tr>
<td>BISC 405-3 Cell Physiology</td>
<td>BISC 429-4 Separation Methods</td>
</tr>
<tr>
<td>BISC 430-3 Plant Pathology</td>
<td>BISC 439-4 Industrial Microbiology</td>
</tr>
<tr>
<td>BISC 449-4 Histological Techniques in Biology</td>
<td>BISC 457-3 Plant Molecular Biology and Biotechnology</td>
</tr>
</tbody>
</table>

Students are encouraged to take a full year of organic chemistry. Medical, dental or veterinary school applicants should include all CHEM courses above.

Field Schools

Intensive

| BISC | BISC 418-3 Parasitology |

Students should choose remaining requirements in an area of specialization. Four biology streams are offered: cell and molecular biology, integrative biology, ecology and evolution and an open stream. The open stream provides broad biological training, or may be used to specialize in an area not offered by the main streams (consult the undergraduate program advisor, individual faculty, or department website for advice on other areas of specialization). The course requirements for each stream are as follows.

Cell and Molecular Biology

Students must complete five stream specific courses from the following

<table>
<thead>
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<th>BISC 302-3 Genetic Analysis</th>
<th>BISC 303-4 Microbiology*</th>
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</tr>
</tbody>
</table>

Students should choose remaining requirements in an area of specialization. Four biology streams are offered: cell and molecular biology, integrative biology, ecology and evolution and an open stream. The open stream provides broad biological training, or may be used to specialize in an area not offered by the main streams (consult the undergraduate program advisor, individual faculty, or department website for advice on other areas of specialization). The course requirements for each stream are as follows. 
MBB 308-3 Molecular Biology and Biochemistry Laboratory I
MBB 322-3 Molecular Physiology*
MBB 331-3 Molecular Biology*
*recommended
plus three electives (nine credit hours) chosen from any upper division undergraduate BISC, MASC or special topics courses appropriate for the selected stream, or alternative courses (e.g. MBB, KIN) as approved by the program advisor.

Students must complete a total of five lab courses (which may include one of BISC 497W, 498, 499) among their upper division courses.

Integrative Physiology

Students must complete one of the following lab courses:
BISC 307-3 Animal Physiology Lab
BISC 367-3 Plant Physiology Lab

plus four stream specific courses from the following:
BISC 312-3 Environmental Toxicology I
BISC 313-3 Environmental Toxicology II
BISC 405-3 Cell Physiology
BISC 432-3 Chemical Pesticides and the Environment
BISC 439-4 Industrial Microbiology
BISC 445-3 Environmental Physiology of Animals
BISC 455-3 Endocrinology
BISC 497W-3 Undergraduate Research: Writing Intensive
BISC 498-3 Undergraduate Research I
BISC 499-3 Undergraduate Research II
MBB 321-3 Intermediary Metabolism*
MBB 322-3 Molecular Physiology*
*recommended

plus three elective courses (nine credit hours) chosen from any upper division undergraduate BISC or MASC or special topics courses appropriate for the selected stream, or alternative courses (e.g. MBB, KIN) as approved by the program advisor.

Students must complete a total of five lab courses (which may include one of BISC 497W, 498, 499) among their upper division courses.

Ecology and Evolution

Students must complete at least one of:
BISC 304-3 Animal Ecology
BISC 404-3 Plant Ecology

plus four stream specific courses from the following:
BISC 310-3 Natural History of British Columbia
BISC 406-3 Marine Biology and Oceanography
BISC 407-3 Population Dynamics
BISC 410-3 Behavioral Ecology
BISC 411-3 Behavioral Ecology Laboratory
BISC 414-3 Limnology
BISC 419-3 Wildlife Biology
BISC 422-3 Population Genetics
BISC 434-3 Paleozoology and Palynology
BISC 435-3 Introduction to Pest Management
BISC 440-3 Biodiversity
BISC 441-3 Evolution of Health and Disease
BISC 497W-3 Undergraduate Research: Writing Intensive
BISC 498-3 Undergraduate Research I
BISC 499-3 Undergraduate Research II
*recommended

plus three elective courses (nine credit hours) chosen from any upper division undergraduate BISC or MASC or special topics courses appropriate for the selected stream, or alternative courses (e.g. MBB, KIN) as approved by the program advisor.

Students must complete a total of five lab courses (which may include one of BISC 497W, 498, 499) among their upper division courses.

Open Stream

Students must complete an additional eight courses (24 credit hours) chosen from any upper division undergraduate BISC or MASC or special topics courses (e.g. MBB, KIN) as approved by the advisor.

Students must complete five lab courses (which may include one of BISC 497W, 498, 499) among their upper division courses.

Typical Lower Division Core Program

Although there are many variations, the following is a typical program for the first four terms.

Term 1
BISC 102-4 Introduction to Biology
CHEM 121-4 General Chemistry and Laboratory I
MATH 154-3 Calculus I for the Biological Sciences
PHYS 101-3 General Physics I

Term 2
BISC 101-4 Introduction to Biology
CHEM 122-2 General Chemistry II
CHEM 281-4 Organic Chemistry I
MATH 155-3 Calculus II for the Biological Sciences

Term 3
CHEM 282-2 Organic Chemistry II
MBB 221-3 Cell Biology and Biochemistry
PHYS 102-3 General Physics II
Elective
and one of
BISC 202-3 Genetics
BISC 204-3 Introduction to Ecology

Term 4
MBB 222-3 Molecular Biology and Biochemistry
STAT 201-3 Statistics for the Life Sciences (or 102)
Electives
and one of
BISC 202-3 Genetics
BISC 204-3 Introduction to Ecology

Note: Biological sciences majors normally complete the chemistry, mathematics and physics requirements as well as the lower division biological sciences courses within the first 60 hours (four terms).

Honors Program

Entry requires a GPA of 3.0 or higher (B standing) and permission of the department. This is for biology students pursuing an advanced degree. It requires a minimum of 60 upper division biological sciences credit hours, or related subjects, which is selected for each student in consultation with appropriate advisors, in relation to career goals.

Students must have completed 30 credit hours at Simon Fraser University in a biological sciences major program. Applications received after more than 90 credit hours have been completed will not normally be considered.

Honors students must also satisfy the following additional requirements:

- maintenance of a minimum of 3.00 CGPA
- completion of 60 hours of upper division biological sciences or related subjects, which will include the core courses required for the major plus BISC 490, 491 and 492W, these latter to constitute the honors thesis, and
- completion of appropriate electives totalling 132 credit hours, including the writing, quantitative and breadth requirements (see “Writing, Quantitative, and Breadth Requirements” on page 7).

Minor Program

Students must complete all of:
BISC 101-4 Introduction to Biology
BISC 102-4 Introduction to Biology

at least two of:
BISC 202-3 Genetics
BISC 204-3 Introduction to Ecology
MBB 221-3 Cell Biology and Biochemistry

plus any 15 upper division biological sciences credit hours, or closely related subject areas (including MASC courses), as approved by the department.

Environmental Toxicology Minor Program

This program gives science undergraduates a thorough overview of environmental toxicology. They will be better qualified and eligible for employment with various industrial and governmental agencies engaged in environmental monitoring and research.

Lower Division Requirements

The following lower division courses are required. Most students pursuing science degree programs will already have credit for most of these courses.

all of:
BISC 101-4 Introduction to Biology
BISC 102-4 Introduction to Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
CHEM 286-2 Organic Chemistry Laboratory II
MBB 221-3 Cellular Biology and Biochemistry

and one of:
BISC 497W-3 Undergraduate Research: Writing Intensive
EVSC 200-3 Introduction to Environmental Science

and one of:
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences

and one of:
MATH 152-3 Calculus II
MATH 153-3 Calculus II for the Biological Sciences

and one of:
PHYS 101-3 General Physics I
PHYS 120-3 Modern Physics and Mechanics

and one of:
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Upper Division Requirements

BISC 312-3 Environmental Toxicology I
BISC 313-3 Environmental Toxicology II
BISC 432-3 Chemical Pesticides and the Environment

plus two of:
BISC 445-3 Environmental Physiology of Animals
(prerequisite BISC 305)
CHEM 371-3 Chemistry of the Aqueous Environment
(prerequisites CHEM 281 [or 150] and 360 [or 261])
KIN 431-3 Environmental Carcinogenesis

and their prerequisites as noted in the “Actuarial Mathematics ACMA” on page 327.

Upper division credit may not fulfill credit hours for more than one program. Some substitutions may be required. Appropriate course substitutions follow.

BISC 366-3 Plant Physiology
BISC 405-3 Cell Physiology
KIN 305-3 Human Physiology I
KIN 306-3 Human Physiology II (Principles of Physiological Regulation)
MBB 412-4 Enzymology

Students interested in an environmental toxicology minor should contact the department early. A 2.00 or higher GPA is required for minor program courses.
Post Baccalaureate Diploma in Biological Sciences
This program is available in various biological sciences areas for students who have already completed a degree (usually) in science and who wish to upgrade their academic credentials. See “Biological Sciences BISC” on page 330 for 600 and 800 division course descriptions.

Marine Science
Marine science programs may include both BISC and MASC courses to fulfill upper division biological sciences requirements.

MASC courses are offered on Vancouver Island’s Bamfield Marine Sciences Centre in conjunction with universities in summer and fall in three or six week blocks. See the department in January for courses, and their use as substitutes for upper division BISC courses in major, minor or honors programs.

Course entry requires application through the Department of Biological Sciences well in advance of course commencement because candidate selection is limited. For information, consult the biology department. To take marine science courses, students must apply for university admission through the usual procedures, and be accepted (see “Admission and Readmission” on page 17). See page 428 for a list of courses.

MASC course offerings may vary because instructors are drawn from different universities so prerequisites may vary slightly. Generally, upper division standing in biology is required; admission is competitive. Consult the brochure published each fall by the Bamfield Marine Sciences Centre which is available from the department well in advance of course commencement.

Students from other Departments
Those not enrolled in biological science programs may take BISC 100, 101, 102. Admission to certain courses may vary slightly. Generally, upper division standing in biology is required; admission is competitive. Consult the brochure published each fall by the Bamfield Marine Sciences Centre which is available from the department well in advance of course commencement. See page 330 for a list of courses.

Co-operative Education Program
 Majors and minors may apply for co-op education which includes four work terms during the academic program. See www.sfu.ca/coop/science or contact the science co-op co-ordinators in P9447 Shrum Science Centre. For information about courses, see “Department of Biological Sciences” on page 317.

Department of Chemistry
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Chair
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Professors Emeriti
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Professors
G. Agnes BSc (Wat), PhD (Alta)A.J. Bennet BSc, PhD (Brist), FCICN.R. Branda BSc (Tor), PhD (MIT), Canada Research ChairR. Cornell BS (Houghton), PhD (Penn)*R. Hill BSc, PhD (WONT), FCICR. Holdcroft BSc (Salf), PhD (J Fraser), FCICP.W. Percival BA, MA, DPhil (Oxf), FCICB.M. Pinio BSc, PhD (Que), FCIC, FRSCR.K. Pomeroy BSc (Lond), PhD (Alta)D. Sen BA (Camb), MPhil, PhD (Yale)*Z-G. Ye BSc (Hefei Technol), MSc (X’ian Jiaotong), PhD (Bordeaux)

Associate Professors
G.W. Leach BSc, MSc, PhD (Tor)P.C.H. Li BSc (HK), MSc, PhD (Tor)D.B. Leznoff BSc (York, Can), PhD (Br Col)E. Plettner BSc, PhD (S Fraser)J.J. Wilkie BSc, PhD (Tor)P.D. Wilson BSc, PhD (England), UK, MSc, PhD (Manc)H.Z. Yu BSc, MSc (Shandong), PhD (Peking)

Assistant Professors
C. Andreou BSc, MSc (Bucharest), PhD (Lond)R.A. Brinton BSc (Wat), PhD (Br Col)M.H. Eikerling BSc (Aachen Tech), PhD (Munich Tech)B.D. Gates BS (W Wash), MS, PhD (Wash), Canada Research ChairM.A. O’Neill BSc, PhD (Dal)D.J. Vocadlo BSc, PhD (Br Col), Canada Research ChairC.J. Walsby BSc, PhD (Can)W. Williams BSc, PhD (Qun)

Adjunct Faculty
M.J. Abrams BA (Bowdoin), PhD (MIT)T.J. Borgford BSc, PhD (Manit)P.D. Brown BSc (S Nazarene), MSc, PhD (Idaho)J.A.C. Cyburne BSc (Acad), PhD (Dal)L.R. Dalton BS, MS, (Mich), PhD (Harvard)C.M. Friesen BS, BSE (U Brown), PhD (Alabama)C.G. Gill BSc (Acad), PhD (Br Col)M.J. Greesser BA, MSc (Brandeis), UK, MSc, PhD (Manc)

Assistant Professors
A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)A.R. Lewis BSc, MSc, PhD (Acad)

Senior Lecturers
R.J. Batchelor BSc (Br Col), PhD (McM)J.C. Brodovitch BSc (Paster, Strais), PhD (McG)A.J.L. Hanlan BSc, PhD (Tor)U.C. Kreis MSc, Dr-Ing (Darmstadt)R.D. Sharma MSc, PhD (Panjab)

Lecturers
R.L. Goyan BSc, PhD (Calg)S.M. Lavieri BSc (Metropol, Venezuela), MSc (Venezolano de Investigaciones Cientificas, Venezuela), PhD (Central de Venezuela)G. Mund BSc (Br Col), PhD (S Fraser)

*joint appointment with biochemistry

Advisor
Dr. K.S. MacFarlane BSc, MSc, PhD (Br Col), CB049 Shrum Science Centre, 778.782.3350, kennmac@sfu.ca

Students Intending to Specialize in Chemistry
The point at which a high school or regional college student enters the chemistry program is governed by the student’s subject knowledge. CHEM 110 and 111 are not required for the BSc degree but are available as electives to those with no chemistry knowledge or who are starting from BC high school chemistry 11. Those with BC high school chemistry 12 (or equivalent) normally start with CHEM 121. Major and honors students must fulfill program requirements below. Whether majoring in chemistry or not, students may not enrol in any CHEM course for which a D grade was obtained in any prerequisite.

The following statements clarify and standardize the minimum requirements that a student must fulfill to complete a chemistry course as well as those to pass a combination lecture/laboratory course.

Course Non-completion
The following will constitute non-completion of the required material in a chemistry course.

- not writing the final examination or its equivalent
- not completing the required minimum number of experiments in a laboratory course or the laboratory component of a course
- not completing additional or alternative material specified by the instructor

The letter grade N will be awarded in these cases. Students must pass both the lecture and laboratory components individually to obtain a passing grade in lecture/laboratory combination courses.

Graduate Courses
Graduate courses are available to senior undergraduate students for upper division chemistry credit. See “Chemistry CHEM” on page 343 for a list of all CHEM courses offered, or consult an advisor for specific course offerings.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
Mathematics and physics courses should be taken as early as possible.

Lower Division Requirements
(50-51 credit hours)
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
CHEM 230-3 Inorganic Chemistry
CHEM 236-3 Inorganic Chemistry Laboratory
CHEM 260-4 Atoms, Molecules, Spectroscopy
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
CHEM 292-2 Organic Chemistry Laboratory II
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III

and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
and all of
PHYS 120-3 Mechanics and Modern Physics
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 131-2 Physics Laboratory I

or all of
PHYS 125-3 Mechanics and Special Relativity
PHYS 126-3 Electricity, Magnetism and Light
PHYS 131-2 Physics Laboratory I

or both of
PHYS 140-4 Studio Physics – Mechanics and Modern Physics
PHYS 141-4 Studio Physics – Optics, Electricity and Magnetism

Upper Division Requirements
(28 credit hours)
CHEM 316-4 Introductory Instrumental Analysis
CHEM 332-3 The Chemistry of Transition Metals
CHEM 336-2 Advanced Inorganic Chemistry Laboratory
CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
and an additional 10 hours of upper division credit in CHEM, MBB or NUSC courses, including at least six credit hours of 400 division CHEM courses.

Electives
(41-42 credit hours)
In addition to the above, students must complete
• courses chosen to fulfil the WQB requirements (see “Writing, Quantitative, and Breadth Requirements” on page 7)
• upper division courses chosen from any faculty (but excluding EDUC 401-407) to total a minimum of 44 upper division credit hours
• electives at any division from any faculty to provide 120 credit hours as is required for the degree.

Specialization in physical or theoretical chemistry requires more mathematics and physics courses than specified above and a computer programming course.

Typical Course Sequence
The following is a typical course sequence for the first four terms. Variations are possible.

Term 1
CHEM 121-4 General Chemistry and Laboratory I
MATH 151-3 Calculus I
PHYS 120-3 Mechanics and Modern Physics electives

Term 2
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
MATH 152-3 Calculus II
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 131-2 Physics Laboratory I elective

Term 3
CHEM 230-3 Inorganic Chemistry
CHEM 238-3 Inorganic Chemistry Laboratory
CHEM 281-4 Organic Chemistry I
MATH 232-3 Elementary Linear Algebra elective

Term 4
CHEM 216-4 Introduction to Analytical Chemistry
CHEM 280-4 Atoms, Molecules, Spectroscopy
CHEM 282-2 Organic Chemistry II
CHEM 286-2 Organic Chemistry Laboratory II
MATH 251-3 Calculus III

Honors Program
Mathematics and physics courses should be taken as early as possible to benefit the study of chemistry.

Lower Division Requirements
(56-57 credit hours)
Students complete the same lower division requirements as those specified for the major program plus the following two additional courses.
PHYS 211-3 Intermediate Mechanics
PHYS 231-3 Introductory Physics Laboratory II

Upper Division Requirements
(46 credit hours)
CHEM 316-4 Introductory Instrumental Analysis
CHEM 332-3 The Chemistry of Transition Metals
CHEM 336-2 Advanced Inorganic Chemistry Laboratory
CHEM 360-3 Thermodynamics and Chemical Kinetics
CHEM 366-2 Physical Chemistry Laboratory
CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
CHEM 481-5 Undergraduate Research
NUSC 341-3 Introduction to Radiochemistry
and one of
CHEM 460-3 Advanced Physical Chemistry
CHEM 464-3 Quantum Chemistry
and an additional 19 upper division credit hours in CHEM, MBB or NUSC courses, including at least nine credit hours of 400 division CHEM courses.

Electives
(27-28 credit hours)
In addition to the above, students must complete
• courses chosen to fulfil the WQB requirements (see page 7)
• upper division courses from any faculty (excluding EDUC 401-407) to total 60 upper division credit hours minimum
• electives at any division from any faculty to provide the minimum 132 credit hours for the honors

Those specializing in physical or theoretical chemistry should take more mathematics courses than specified above and a course in computer programming.

Minor Program
See “Major – Minor Program” on page 6 for regulations. Chemistry minors require a minimum of 14 upper division credit hours in chemistry, biochemistry or nuclear science (including at least eight credit hours in chemistry and excluding undergraduate research courses) plus prerequisites.

Environmental Chemistry Minor Program
Students must complete all of
CHEM 121-4 General Chemistry I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
CHEM 230-3 Inorganic Chemistry
CHEM 236-3 Inorganic Chemistry Laboratory
CHEM 281-4 Organic Chemistry I
CHEM 316-4 Introductory Instrumental Analysis
CHEM 317-2 Analytical Environmental Chemistry
CHEM 371-3 Chemistry of the Aqueous Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
and at least one of
CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
CHEM 419-3 Special Topics in Analytical Chemistry
NUSC 341-3 Introduction to Radiochemistry
*CHEM 360 must be taken as a prerequisite

Nuclear Science Minor Program
To qualify for this program offered jointly with the Department of Physics, students must complete 14 upper division credit hours from the following.
CHEM 482-3 Directed Study in Advanced Topics of Chemistry
NUSC 342-3 Introduction to Radiochemistry
NUSC 344-3 Nucleosynthesis and Distribution of the Elements
NUSC 346-2 Radiochemistry Laboratory
NUSC 444-3 Special Topics in Nuclear Science
NUSC 485-3 Particle Physics
PHYS 385-3 Quantum Physics

Advice to Students from Other Faculties
Prerequisites and corequisites cited in the Course Catalogue are for those intending to specialize in science. Some may be waived for programs in the Faculties of Applied Sciences, Arts, Business Administration and Education. CHEM 110 and 111 are for students with no previous training in chemistry.

Biochemistry
For information about biochemistry, see “Department of Molecular Biology and Biochemistry” on page 225.

Chemical Physics
See “Chemical Physics Major Program” on page 230.

Co-operative Education
N. Yano, co-op co-ordinator, Faculty of Science, 778.782.4854
Co-op combines work experience with academic studies. The student spends alternating terms on campus and in study related jobs. A major and honors program leading to a BSc, and a co-op education program incorporating four work terms are available in chemistry and related areas. The work placement requirements are CHEM 306, 307, 406 and 407. Application is at least three months prior to term start in which CHEM 306 is taken. Seek department advice early. A minimum 2.67 CGPA is required to enrol and continue in the co-op major. Higher averages are required for entry and continuance in an honors in co-op education. See page 237.

Department of Earth Sciences
7201 Technology and Science Complex 1,
778.782.5387 Tel, 778.782.4198 Fax,
www.sfu.ca/earth-sciences
Chair
D.J. Thorikelson BSc, MSc (Br Col), PhD (Car)
Professor Emeritus
M.C. Roberts BSc (Lond), MA (Tor), PhD (Iowa), PGeo
Professors
A.J. Calvert BA (Oxf), PhD (Camb)
J.J. Clague BA (Occidental), MSc (Calif, PhD (Br Col), PGeo, Canada Research Chair in Natural Hazards
D. Sted BSc (Exe), MSc (Leeds), PhD (Nott), CEng, Forest Renewal BC Chair in Resource Geoscience and Geotechnics

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Associate Professors
D.M. Allen BSc, MSc, PhD (Car), PGeo
J.A. MacEachern BSc, MSc (Regina), PhD (Alta)
D. Marshall BSc, MSc (Car), DSc (Lausanne)
P.S. Mustard BSc (Calg), MSc, PhD (Car), PGeo
D.J. Thorkelson BSc, MSc (Br Col), PhD (Car)
B.C. Ward BSc, PhD (Alta)
Assistant Professors
S. Dashtgard BSc, PhD (Alta), PGeo
G. Flowers BA (Colorado), PhD (Br Col), Canada Research Chair in Glaciology
H.D. Gibson, BSc (Colgate), MSc, PhD (Car)
D. Kirste BSc (Br Col), MSc (Wat), PhD (Calg)
G. Williams-Jones BSc, MSc (Montr), PhD (Open, UK)
Adjunct Professors
K.L. Bann BSc, PhD (W'gong)
P. Bobrowsky BSc (Alta), MA (S Fraser), PhD (Alta)
B.P. Coffey BSc (N Carolina), PhD (VPI&SU)
M. Colpron BSc (Queb), MSc (Vermont), PhD (Q'ub)
R. Enkin BSc, MSc (Tir), Diplomate Doctorat (Paris)
D. Froese BSc (Leth), MSc, PhD (Calg)
L. Godin BSc, MSc (Queb), PhD (Car)
L. Jackson BA (San Francisco), MSc (Stan), PhD (Calg),
D. Kirste BSc, PhD (MIT)
B. Rabus MA (Mun), PhD (Alaska)
K.A. Simpson BSc (Br Col), PhD (Tas)
P.H. Whitfield BSc, MSc (Br Col)
Senior Lecturer
R. Dunlop BSc (Alta), MSc (Br Col)
Lecturer
K. Cameron BSc (St Mary’s, Can), MSc (Nfld)
Academic Advisor
Ms. T. Vaisanen, 7203 Technology and Science Complex 1, 778.782.4779

Lower Division Requirements
Students in all streams must complete a minimum of 54 credit hours including all of
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-4 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
EASC 101-3 Physical Geology
EASC 201-3 Stratigraphy and Sedimentation
EASC 202-3 Introduction to Mineralogy
EASC 204-3 Structural Geology I
EASC 205-3 Introduction to Petrology
EASC 206-2 Field Geology I
EASC 207-3 Introduction to Applied Geophysics
EASC 208-3 Introduction to Geochemistry
EASC 210-3 Historical Geology
GEOG 213-3 Geomorphology
MATH 152-3 Calculus I and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I and one of
STAT 101-3 Introduction to Statistics
STAT 201-3 Statistics for the Life Sciences
and one of
PHYS 102-3 General Physics II* and one of
PHYS 121-3 Quantum Physics
PHYS 126-2 Modern PhysicsLAB I
PHYS 127-2 Modern Physics II
PHYS 128-2 Modern PhysicsLAB II
PHYS 130-2 General Physics Laboratory*
PHYS 131-2 Physics Laboratory I
*with a grade of B or better

Upper Division Requirements
Students are encouraged to select upper division elective courses for each stream, respectively.

Geology Stream
Students must complete a minimum of 42 credit hours including all of
EASC 202-3 Sedimentary Petrology
EASC 206-3 Field Geology II
EASC 309-3 Global Geophysics
EASC 401-3 Igneous and Metamorphic Petrology
EASC 402-3 Sedimentology
EASC 403-3 Quaternary Geology
EASC 404-3 Structural Geology II
EASC 406-3 Field Geology III
EASC 408-3 Regional Geology of Western Canada
EASC 410-3 Groundwater Contaminant and Transport
EASC 411-3 Terrain Analysis
EASC 412-3 Groundwater Geochemistry
EASC 413-3 Resource Geotechnics
EASC 416-3 Field Techniques in Hydrogeology
EASC 417-3 Seismology
EASC 420-3 Petroleum Geology
EASC 421-3 Volcanology
EASC 491-1 Directed Reading*
EASC 492-2 Directed Reading*
EASC 493-3 Directed Reading*

Environmental Geoscience Stream
Students must complete a minimum of 29 credit hours including all of
EASC 303-3 Environmental Geoscience
EASC 304-3 Hydrogeology
EASC 306-3 Field Geology II
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 403-3 Quaternary Geology
EASC 411-3 Geomorphology
and at least one of
EASC 301-3 Igneous and Metamorphic Petrology
EASC 302-3 Sedimentary Petrology
EASC 309-3 Global Tectonics
EASC 310-3 Paleontology
and at least one of
EASC 406-3 Field Geology III
EASC 416-3 Field Techniques in Hydrogeology
and a minimum of 15 credit hours chosen from
EASC 300-3 Selected Topics in Earth Sciences
EASC 301-3 Igneous and Metamorphic Petrology
EASC 302-3 Sedimentary Petrology
EASC 303-3 Global Tectonics
EASC 310-3 Paleontology
EASC 312-3 Stratigraphy
EASC 314-3 Principles of Glaciology
EASC 317-3 Global Geophysics
EASC 400-3 Selected Topics in Earth Sciences
EASC 401-3 Mineral Deposits
EASC 402-3 Sedimentology
EASC 403-3 Quaternary Geology
EASC 404-3 Structural Geology II
EASC 406-3 Field Geology III
EASC 408-3 Regional Geology of Western Canada
EASC 410-3 Groundwater Contaminant and Transport
EASC 411-3 Terrain Analysis
EASC 412-3 Groundwater Geochemistry
EASC 413-3 Resource Geotechnics
EASC 416-3 Field Techniques in Hydrogeology
EASC 417-3 Seismology
EASC 418-1 Terrain Stability: Assessment and Mitigation
EASC 419-1 Forest Harvesting Technology
EASC 420-3 Petroleum Geology
EASC 421-3 Volcanology
EASC 491-1 Directed Reading*
EASC 492-2 Directed Reading*
EASC 493-3 Directed Reading*

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EASC 306-3 Field Geology II
and at least one of
EASC 406-3 Field Geology III
EASC 416-3 Field Techniques in Hydrogeology
and a minimum of 30 other upper division EASC credit hours.

*students may only complete a maximum of three credit hours from a combination of EASC 491, 492, or 493

Other Requirements
Students in the geology stream must also complete at least two additional credit hours in the Faculty of Science or physical geography at the upper division. These courses may be used toward the minor requirements in another department. Some of these courses may also satisfy APEGBC requirements. Students in the general earth sciences stream must also complete at least eight additional credit hours in the Faculty of Science or physical geography at the upper division. These courses may be used toward the minor requirements in another department.

In addition, of the 120 credit hours required for graduation, students complete six credit hours of courses designated as Writing (W), six credit hours of courses designated as Quantitative (Q); and 24 credit hours of courses identified as Breadth (B), including 18 credit hours of courses identified as Designated Breadth courses (six credit hours of social sciences, six of humanities and six of science), and six credit hours of courses identified as Undesignated Breadth (UB) taken outside the major program. Several WQB courses are satisfied within the major program.

Honors Program
This BSc program offers a wider cross-section of discipline-related courses while providing an opportunity for independent research. Entry requires a 3.00 or higher (B standing) CGPA, and departmental permission. This program has the same requirements as the major except for the following additional requirements.

- maintenance of a minimum 3.00 CGPA
- completion of a minimum of 60 credit hours of 300 and 400 division EASC or physical geography courses, or related courses approved by the department. Students are strongly advised to select courses in consultation with advisors and in consideration of their career goals.
- completion of appropriate electives to achieve a final total of at least 132 credit hours, including at least 12 credit hours from outside the Faculty of Science
- completion of EASC 499

Minor Program
Earth Sciences minor students are subject to the general regulations of the faculty in which they are enrolled and must complete a minimum of 15 upper division credit hours in Earth Sciences (EASC 300 division and above), together with all prerequisites.

Certificate in Forestry Geoscience
This program provides specialization in geoscience courses that have direct relevance to forestry industry careers. It is directed to undergraduates completing a major in earth sciences or physical geography. Credit hours for this certificate may not be applied to another Simon Fraser University certificate or diploma.

Program Requirements
The certificate requires the completion of 30-32 credit hours of required course work and electives as follows.

Required Courses (24 credit hours)
EASC 204-3 Structural Geology I
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 411-3 Terrain Analysis
EASC 413-3 Resource Geotechnics
EASC 418-1 Terrain Stability: Assessment and Mitigation
EASC 419-1 Forest Harvesting Technology
GEOG 213-3 Geomorphology
GEOG 317-4 Soil Science I
and either
GEOG 253-3 Aerial Photographic Interpretation
or both of
EASC 206-2 Field Geology
EASC 306-3 Field Geology II

Elective Courses
Students must complete one of
EASC 304-3 Hydrogeology
GEOG 311-4 Hydrology I
and one of
EASC 403-3 Quaternary Geology
GEOG 313-3 Geomorphology II
GEOG 412-4 Glacial Processes and Environments
GEOG 417-4 Soil Science II

Co-operative Education
Co-operative education, combining relevant work experience with academic studies in alternate terms on campus and in study related employment, includes pre-employment orientation and four full-time paid work terms. Co-operative education is available to qualified earth sciences major and honors students.

To enrol, students should attend the co-op information meetings held in the first two weeks of the term prior to the term in which they wish to work. Students should seek advice from the science and environment co-operative education office as early as possible in their university careers to facilitate optimal scheduling. Contact the Co-operative Education Office, 8108 South Science Building, 778.782.4716.

Professional Registration as a BC Geoscientist
The right to practice in, and to accept professional responsibility for geoscience in BC is limited to registered members of the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). Requirements can be met through the Department of Earth Sciences and selected courses from other university departments. Consult the advisor for further details.

Environmental Science Program
www.sfu.ca/envsci
Program Director
L. I. Bendell-Young, Department of Biological Sciences, 8109A South Science Building, 778.782.5621 Tel, 778.782.3496 Fax, bendell@sfu.ca
Advisor
Ms. R. Hellit, faculty assistant, Faculty of Science, P9316 Shrum Science Centre, 778.782.3772 Tel, 778.782.3424 Fax, hotel1@sfu.ca
Subject Advisors
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Dr. G. Williams-Jones, Department of Earth Sciences, TASC 1-7201, 778.782.3306 Tel, 778.782.4198 Fax, glynwj@sfu.ca
Dr. M. Chen, Department of Physics, P9442 Shrum Science Centre, 778.782.4244 Tel, 778.782.5786 Fax, mxchen@sfu.ca
Dr. L.W. Lesack, Department of Geography, 7225 Robert C. Brown Hall, 778.782.3326 Tel, 778.782.5841 Fax, lance_lesack@sfu.ca

This program provides a broad education with specialization in one of six areas of emphasis: biology, chemistry, envionometrics, physical geography, pollutant transport, and quantitative techniques for resource management. Extensive lower division requirements necessitate careful planning of course sequencing to ensure timely completion of the program. For advice about admission and general program requirements, see the director or faculty assistant.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
The minimum CGPA for continuation and graduation is 2.50. General University and Faculty of Science regulations also apply. The following requirements, organized by year, suggest a sequence for timely program completion.

Biology
Year One
BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-4 General Chemistry II
CHEM 128-2 General Chemistry Laboratory II
REM 100-3 Global Change
and one of
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
MATH 157-3 Calculus for the Social Sciences I
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
MATH 158-3 Calculus for the Social Sciences II
and one of
PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics
Year Two
BISC 204-3 Introduction to Ecology
CHEM 215-4 Introduction to Analytical Chemistry
CHEM 230-3 Inorganic Chemistry
CHEM 281-4 Organic Chemistry I
CHEM 282-3 Organic Chemistry II
CHEM 283-1 Inorganic Chemistry
CHEM 284-4 Analytical Chemistry
CHEM 308-3 Physical Chemistry
MBB 221-3 Cellular Biology and Biochemistry
and one of
STAT 270-3 Introduction to Probability and Statistics
STAT 281-3 Statistics for the Life Sciences I
and one of
PHYS 102-3 Physics for the Life Sciences II
PHYS 213-3 Optics, Electricity and Magnetism
Year Three
BISC 305-3 Animal Physiology
BISC 306-3 Animal Physiology
BISC 312-3 Environmental Toxicology I
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
PHYS 346-3 Energy and the Environment
STAT 302-3 Analysis of Experimental and Observational Data
Year Four
BISC 202-3 Genetics
BISC 404-3 Plant Ecology
BISC 414-3 Limnology
EVSC 401-1 Current Topics in Environmental Science
GEOG 316-4 Ecosystem Biogeochecmy
STAT 403-3 Intermediate Sampling and Experimental Design
and any three courses from the following to be completed in years three or four (suggested course groupings need not be followed).

Field Course
EVSC 491W-3 Advanced Field Studies in Environmental Science

Plant Biology
BISC 310-3 The Natural History of British Columbia
BISC 326-3 Biochemistry and Fungi
BISC 337-3 Plant Biology
BISC 366-3 Plant Physiology

Invertebrate Biology
BISC 306-3 Invertebrate Biology
BISC 406-3 Marine Biology and Oceanography

Vertebrate Biology
BISC 316-3 Vertebrate Biology
BISC 407-3 Population Dynamics
BISC 416-3 Fish Biology
BISC 419-3 Wildlife Biology

Resource and Environmental Management
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Management Institutions
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment
REM 471-3 Forest Ecosystem Management

Note: MBB 221 and 222 are complementary courses and together cover all aspects of cellular structure and function. It is strongly recommended that students take MBB 222 as an elective.

Electives
Additional electives are required to meet the total 120 credit hour graduation requirement, including at least 44 at the upper division.

Chemistry
These Year One and Two requirements are the same as for the biology area of emphasis. Please refer to that section above.

Year Three
CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
CHEM 460-3 Advanced Physical Chemistry
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 316-4 Ecosystem Biogeochecmy
GEOG 317-4 Soil Science I
NUSC 341-3 Introduction to Radiochemistry
NUSC 342-3 Introduction to Nuclear Science
NUSC 346-2 Radiochemistry Laboratory
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Management Institutions
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment

Electives
Additional electives may be required to meet the 120 credit hour graduation requirement, including at least 44 at the upper division.

Environmetrics
These Year One and Two requirements are the same as for the biology area of emphasis except that students must take STAT 270, and not the alternative course, STAT 201. Please refer to that section for other requirements.

Year Four
CHEM 350-3 Chemical Kinetics and Thermodynamics
CHEM 316-4 Introductory Instrumental Analysis
CHEM 371-3 Chemistry of the Aquiferous Environment
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MATH 223-2 Elementary Linear Algebra
MATH 251-3 Calculus III
STAT 285-3 Intermediate Probability and Statistics
STAT 350-3 Linear Models in Applied Statistics

Electives
Additional electives are required to meet the total 120 credit hour graduation requirement, including at least 44 at the upper division.

Suggested Groupings of Courses
The following course groupings for different focuses are suggested.

Biological Focus
BISC 304-3 Animal Ecology
BISC 312-3 Environmental Toxicology I
PHYS 346-3 Energy and the Environment
STAT 302-3 Analysis of Experimental and Observational Data
and one of
GEOG 352-4 Techniques in Spatial Analysis II
STAT 403-3 Intermediate Sampling and Experimental Design
two of
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Biogeography II
GEOG 411-4 Hydrology II
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Geomorphology III
GEOG 414-4 Climatology III
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
and three of
BISC 310-3 Plants and Animals of British Columbia
BISC 366-3 Plant Physiology
BISC 367-3 Plant Physiology Laboratory
BISC 404-3 Plant Ecology
BISC 413-4 Limnology
BISC 416-3 Fish Biology
BISC 434-3 Paleocology and Palynology
CHEM 371-3 Chemistry of the Aqueous Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-4 Environmental Geoscience
EASC 304-4 Hydrogeology
EASC 416-3 Field Techniques in Hydrogeology
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 213-3 Geomorphology I
GEOG 310-3 Regional Ecosystems
GEOG 311-4 Hydrology I
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 317-4 Soil Science I
GEOG 318-4 Geographical Information Science
GEOG 351-4 Cartography and Visualization
GEOG 352-4 Techniques in Spatial Analysis II
GEOG 411-4 Hydrology II
GEOG 413-4 Geomorphology III
GEOG 414-4 Climatology III
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
and at least 12 credit hours selected from outside the Faculty of Science.

Suggested Groupings of Courses

Aquatic Chemistry Focus
BISC 414-3 Limnology
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aquatic Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-4 Environmental Geoscience
EASC 307-3 Applied Geophysics
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 403-3 Quaternary Geology
EASC 416-3 Field Techniques in Hydrogeology
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 317-4 Soil Science I
GEOG 318-4 Geographical Information Science
GEOG 411-4 Hydrology II
GEOG 413-4 Climatology III
GEOG 414-4 Climatology II
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
and one of
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
MATH 157-3 Calculus for the Social Sciences I
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
MATH 158-3 Calculus for the Social Sciences II
and one of
PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics*
*recommended

Suggested Groupings of Courses

Aquatic Chemistry Focus
BISC 414-3 Limnology
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aquatic Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-4 Environmental Geoscience
EASC 307-3 Applied Geophysics
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 403-3 Quaternary Geology
EASC 416-3 Field Techniques in Hydrogeology
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 317-4 Soil Science I
GEOG 318-4 Geographical Information Science
GEOG 411-4 Hydrology II
GEOG 413-4 Climatology III
GEOG 414-4 Climatology II
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
and at least 12 credit hours selected from outside the Faculty of Science.

Suggested Groupings of Courses

Aquatic Chemistry Focus
BISC 414-3 Limnology
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aquatic Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-4 Environmental Geoscience
EASC 307-3 Applied Geophysics
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 403-3 Quaternary Geology
EASC 416-3 Field Techniques in Hydrogeology
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 317-4 Soil Science I
GEOG 318-4 Geographical Information Science
GEOG 411-4 Hydrology II
GEOG 413-4 Climatology III
GEOG 414-4 Climatology II
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
and at least 12 credit hours selected from outside the Faculty of Science.

Suggested Groupings of Courses

Aquatic Chemistry Focus
BISC 414-3 Limnology
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aquatic Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-4 Environmental Geoscience
EASC 307-3 Applied Geophysics
EASC 313-3 Introduction to Soil and Rock Engineering
EASC 403-3 Quaternary Geology
EASC 416-3 Field Techniques in Hydrogeology
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 317-4 Soil Science I
GEOG 318-4 Geographical Information Science
GEOG 411-4 Hydrology II
GEOG 413-4 Climatology III
GEOG 414-4 Climatology II
GEOG 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
Faculty of Science – Environmental Science Program

GEOG 354-4 Introduction to Geographic Information Systems
STAT 403-3 Intermediate Sampling and Experimental Design

Atmospheric Focus
BISC 312-3 Environmental Microbiology
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 372-3 Chemistry of the Atmospheric Environment
GEOG 314-4 Climatology
GEOG 414-4 Climatology III
NUSC 341-3 Introduction to Radiochemistry
PHYS 346-3 Energy and the Environment
REM 412-3 Environmental Modelling

Transport Modelling Focus
EASC 416-3 Field Techniques in Hydrogeology
GEOG 354-4 Introduction to Geographic Information Systems
MATH 322-3 Complex Variable
MATH 416-3 Numerical Analysis II
MATH 418-3 Partial Differential Equations
MATH 457-3 Dynamical Systems
MATH 462-3 Fluid Dynamics
MACM 316-3 Numerical Analysis I
REM 412-3 Environmental Modelling
STAT 403-3 Intermediate Sampling and Experimental Design

Quantitative Techniques for Resource Management

Year One
BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 120-3 General Chemistry I
CHEM 122-2 General Chemistry II
ECON 103-3 Principles of Microeconomics
REM 100-3 Global Change
and one of
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
MATH 157-3 Calculus for the Social Sciences I
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
MATH 158-3 Calculus for the Social Sciences II
and one of
PHYS 101-3 Physics for the Life Sciences I
PHYS 120-3 Mechanics and Modern Physics

Year Two
BISC 204-3 Introduction to Ecology
ECON 105-3 Principles of Macroeconomics
ECON 260-3 Environmental Economics
EVSC 200-3 Introduction to Environmental Science
GEOG 111-3 Physical Geography
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III
STAT 270-3 Introduction to Probability and Statistics
and one of
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 102-3 Introduction to Scientific Computer Programming
and one of
PHYS 102-3 Physics for the Life Sciences II
PHYS 121-3 Optics, Electricity and Magnetism

Year Three
BISC 304-3 Animal Ecology
MACM 316-3 Numerical Analysis I
MATH 308-3 Linear Programming
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 346-3 Energy and the Environment
STAT 285-3 Intermediate Probability and Statistics
STAT 350-3 Linear Models in Applied Statistics

Year Four
BISC 407-3 Population Dynamics
EVSC 401-1 Current Topics in Environmental Science
MATH 309-3 Continuous Optimization
STAT 402-3 Generalized Linear and Nonlinear Modelling
STAT 410-3 Statistical Analysis of Sample Surveys
STAT 430-3 Statistical Design and Analysis of Experiments
and at least four courses from the following to be completed in years three or four
BISC 300-3 Evolution
BISC 305-3 Animal Physiology
ECON 261-3 Resources and the Economy of British Columbia
EVSC 491W-3 Advanced Field Studies in Environmental Science
GEOG 354-4 Introduction to Geographic Information Systems
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Management Institutions
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment and Management of Hazardous Substances
REM 471-3 Forest Ecosystem Management

Electives
Additional electives are required to meet the total graduation requirement of 120 credit hours, including at least 44 at the upper division.

Suggested Groupings of Courses
The following groupings of courses for different focuses are suggested.
Fisheries Focus
BISC 300-3 Evolution
BISC 305-3 Animal Physiology
GEOG 354-4 Introduction to Geographic Information Systems
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Management Institutions
REM 412-3 Environmental Modelling

Economic Focus
ECON 261-3 Resources and the Economy of British Columbia
GEOG 354-4 Introduction to Geographic Information Systems
REM 311-3 Applied Ecology and Sustainable Environments
REM 356-3 Management Institutions
REM 445-3 Environmental Risk Assessment and Management of Hazardous Substances

Honors Program
This program requires 132 credit hours including the writing, quantitative and breadth requirements. See “Writing, Quantitative, and Breadth Requirements” on page 7. At least 60 must be upper division. Of these 60, at least 48 must be in one subject area and are normally from the 300-400 division required or optional courses in an area of emphasis. Exceptions must be approved by a faculty advisor. Further requirements are listed in each area of emphasis. Minimum CGPA for continuation and graduation is 3.00. General University and Faculty of Science regulations also apply.

Biology
Students must complete all requirements in the major program, plus all requirements for the honors program. The required 48 upper division credit hours in a specific subject requires all of
BISC 490-5 Research Design
BISC 491-5 Research Technique
BISC 492-5 Research Reporting
Other courses may be substituted subject to the approval of a faculty advisor.

Chemistry
Students must complete all requirements for this area of emphasis in the major program, plus all requirements for the honors program, and also
CHEM 481-5 Undergraduate Research
To fulfill the required 48 upper division credit hours in a specific subject, students choose further major program courses as options in years three and four. Other courses may substitute, subject to faculty advisor approval.

Environmetrics
Students must complete all requirements for this area of emphasis in the major program, plus all requirements for the honors program, and also
STAT 330-3 Introduction to Mathematical Statistics
STAT 450-3 Statistical Theory
To fulfill the required 48 upper division hours in a specific subject area, students normally will choose further courses listed in the major program as options in years three and four. Other courses may be substituted on approval of a faculty advisor.

Physical Geography
Students must complete all area of emphasis requirements, plus all honors requirements. To fulfill the required 48 upper division credit hours in a specific subject area, students must complete
GEOG 491-4 Honors Essay
and choose further major program courses as options in years three and four. Other courses may be substituted subject to the approval of a faculty advisor.

Pollutant Transport
Students must complete all requirements for this area of emphasis in the major program, plus all requirements for the honors program. To fulfill the required 48 upper division credit hours in a specific subject area, the student normally will choose further courses listed in the major program as options in years three and four. Students wishing to use a research thesis towards meeting this requirement may seek approval from a faculty member in earth sciences to enroll in EASC 499. Other courses may be substituted with approval of a faculty advisor.

Quantitative Techniques for Resource Management

Students must complete all requirements for this area of emphasis in the major program, plus all requirements for the honors program. Students wishing to use a research thesis towards meeting this requirement may seek approval from a faculty member in earth sciences to enroll in EASC 499. Other courses may be substituted with approval of a faculty advisor.

Co-operative Education
This program combines relevant work experience with academic studies. Students alternate terms on campus with study related employment. The program
Qualifications for Registered Professional Biologist of BC

Registered professional biologist (RPBio) status is an important, common qualification for biologists practising in BC. Environmental science students can meet the academic qualifications by taking three more 200 division or higher biology courses beyond the biology stream requirements. RPBio status is then possible after three years of appropriate work experience and completion of an acceptable professional report. Students and graduates may join the College of Applied Biology of BC (CAB) as student biologists and biologists in training respectively, before they meet all of the qualifications. Contact the biology stream advisor or the College of Applied Biology of BC at cab@cab-bc.org

General Science Program

P9310 Shrum Science Centre, 778.782.3772 Tel, 778.782.3424 Fax, www.sfu.ca/~science/degrees/general.html
Advisor
Ms. R. Hotell, Faculty Assistant

This degree program provides broad education in several fields with specialization in at least two. It requires two minors chosen from below, one of which must be in the Faculty of Science. Restrictions for the combination of minors is listed below. Students must have their selection of minors for the BSc general science program approved by the program advisor as early in their program as possible. Only one minor may be selected from each of the following six subject areas.

- biological sciences, environmental toxicology, kinesiology
- molecular biology and biochemistry, chemistry, environmental chemistry
- mathematics, statistics, computing science
- physics, nuclear science
- earth science, physical geography
- archaeology, psychology

Because of the proximity of subject matter, the following combinations of minors are not acceptable:

- biological sciences, molecular biology and biochemistry
- molecular biology and biochemistry, environmental toxicology
- chemistry, nuclear science
- kinesiology, molecular biology and biochemistry
- environmental chemistry, environmental toxicology

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for more information.

Lower Division Requirements

Students must complete all of

- BISC 101-4 General Biology
- BISC 102-4 General Biology
- CHEM 121-4 General Chemistry and Laboratory I
- CHEM 122-2 General Chemistry II
- CHEM 126-2 General Chemistry Laboratory II and all of
- PHYS 101-3 Physics for the Life Sciences I
- PHYS 102-3 Physics for the Life Sciences II
- PHYS 130-2 Physics for the Life Sciences Laboratory or all of
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 121-3 Optics, Electricity and Magnetism
- PHYS 131-2 General Physics Laboratory I or all of
- PHYS 140-4 Studio Physics – Mechanics and Modern Physics
- PHYS 141-4 Studio Physics – Optics, Electricity and Magnetism
- and both of
- MATH 154-3 Calculus I for the Biological Sciences
- MATH 155-3 Calculus II for the Biological Sciences or both of
- MATH 151-3 Calculus I (or MATH 150)
- MATH 152-3 Calculus II

Other Requirements

The student must also satisfy the following general requirements.

- one statistics course at the upper or lower division
- additional upper division courses (excluding EDUC 401-407) to accumulate a minimum total of 44 credit hours of upper division credit
- a minimum of 12 credit hours in subjects outside the Faculty of Science, including a minimum of six credit hours from the Faculty of Arts and Social Sciences
- a GPA of 2.0 in upper division courses required for each of two subject area minors, with a minimum C-grade in all courses used for the subject area minors

Consult departmental advisors about selection of upper division courses in subject minors. Students should include science-related courses such as PHIL 244, 341 and HIST 360, 361 in their programs.

Life Sciences Year Two Program

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7488 Tel, 778.782.7488 Fax, www.surrey.sfu.ca/science
Advisor
Mrs. N. Williams BA (S Fraser), (14th floor) Central City, 778.782.7486

This program, offered at Simon Fraser University Surrey, consists of 200 division science courses in biological sciences (BISC), chemistry (CHEM), molecular biology and biochemistry (MBB) and statistics (STAT). The courses, completed over two consecutive terms (fall and spring), are useful for students intending to major in either biological sciences or molecular biology and biochemistry. The program will also aid those students who wish to apply to professional schools in dentistry, medicine, pharmacy, optometry, veterinary science, and other life sciences areas.

Students who have completed appropriate courses in the Science Year One Program (see “Science Year One Program” on page 232) are guaranteed admission to the Life Sciences Year Two Program. Other students who have completed appropriate prerequisites by the fall of program admission will be admitted to the Life Sciences Year Two Program depending on available space.

A list of courses, offered by this program, is published in the fall for future fall and spring terms. For planning purposes, this can be viewed at www.surrey.sfu.ca/science.

Students are required to enrol in at least two of the courses offered in this program each term. Students are free to complete other Simon Fraser University courses (offered at any campus or by distance education) provided that those courses do not conflict with the program.

Note that the lab courses CHEM 126 and 286, and the laboratory component of CHEM 281 use the laboratory facilities at the Burnaby campus because suitable facilities are not yet available at Simon Fraser University Surrey.

After completion of this program, students will continue their studies as students in the faculty to which they were originally admitted.

Students without a declared major are encouraged to discuss their long term academic goals with the program advisor during their first term.

Management and Systems Science Program

K10545 Shrum Science Centre, 778.782.3803 Tel, 778.782.4368 Fax, www.stat.sfu.ca

For a list of faculty, see “Department of Mathematics” on page 221 and “Department of Statistics and Actuarial Science” on page 232.

Advisor
Dr T.M. Loughin BSc (Rensselaer), MSc (N Carolina), PhD (Iowa State), #173–335 Central City, Simon Fraser University Surrey, 778.782.8037

The Department of Mathematics and the Department of Statistics and Actuarial Science, in conjunction with the Faculty of Business Administration, the School of Computing Science and Department of Economics, offer a major and honors in management and systems science (MSSC) at Simon Fraser University Surrey. This highly structured program, which leads to a BSc degree, provides a multidisciplinary approach to quantitative methods for business and industry in an environment of rapid changes in technology.

The program is managed jointly by the Department of Mathematics and the Department of Statistics and Actuarial Science. A program director is selected from the associated faculty of these two departments. A steering committee consisting of representatives of these departments and of the Faculty of Business Administration, the School of Computing Science and Department of Economics serves as liaison between the departments and the program director. Where possible, the director and steering committee members will be based on the Surrey campus.

Students formally apply to be admitted into the program. Applications are considered for students entering Simon Fraser University, and for those already enrolled. Admission is competitive. Students must maintain a 2.7 cumulative grade point average (CGPA) in MSSC program course work to remain in the program and to graduate. It is strongly recommended that students contact the Surrey campus science advisor or program director early about admission and scheduling.

Simon Fraser University 2007 · 2008 Calendar
Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative, and Breadth Requirements" on page 7 for more information.

Major Program

Under program and University regulations, a general degree requires a minimum of 44 upper division credit hours in courses numbered 300 and above, completion of at least 120 credit hours, and completion of the major program.

Students must complete all lower and upper division courses as shown below. However, students should be aware of the departmental requirements for entrance into courses. Contact those departments for further information.

Lower Division Requirements

Business Administration

BUS 207-3 Managerial Economics" BUS 251-3 Financial Accounting I (Computing Science)
BUS 272-3 Behavior in Organizations

*may be waived if credit for ECON 301 is obtained

Computing Science

CMPT 125-3 Introduction to Computing Science and Programming I
CMPT 126-3 Introduction to Computing Science and Programming
CMPT 225-3 Data Structures and Programming
CMPT 275-4 Software Engineering

Economics

ECON 103-3 Principles of Economics (I) - Microeconomics
ECON 105-3 Principles of Economics (II) - Macroeconomics

Mathematics and Computing Science

MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II

Mathematics

MATH 152-3 Calculus II
MATH 251-3 Calculus III

and one of

MATH 232-3 Elementary Linear Algebra
MATH 240-3 Algebra I: Linear Algebra

and one of

MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
MATH 157-3 Calculus for the Social Sciences I

Statistics

STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics

Upper Division Requirements

For a BSc in management and systems science, all of the upper division courses listed below are required.

Business Administration

BUS 343-3 Introduction to Marketing
BUS 360-3 Business Communication
BUS 361-3 Project Management
BUS 473-4 Operations Management

Computing Science

one of

BUS 440-4 Simulation in Management Decision Making
CMPT 305-3 Computer Simulation and Modelling
and all of

CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems I
CMPT 370-3 Information System Design

Management and Systems Science

MSSC 480-1 Undergraduate Seminar in Management and Systems Science
MSSC 481-1 Undergraduate Seminar in Management and Systems Science

Mathematics

MATH 308-3 Linear Optimization
MATH 348-3 Probabilistic Models in Operations Research
and one of

MACM 316-3 Numerical Analysis I
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory

Students should note the prerequisites for these courses. However, BUS 237 and 336 are waived for MSSC majors and honors.

MSSC 480 and 481 cannot be taken concurrently.

Statistics

STAT 350-3 Linear Models in Applied Statistics
STAT 380-3 Introduction to Stochastic Processes

Recommended Courses

BUS 312-4 Business Finance
BUS 440-4 Simulation in Management Decision Making
BUS 488-3 Human Relations in Business
BUED 396-3 The Structure of Industry
CMPT 212-3 Object-Oriented Applications Design in C++
CMPT 305-3 Computer Simulation and Modeling
CMPT 417-3 Intelligent Systems
ECON 431-5 Intermediate Mathematical Economics
MACM 316-3 Numerical Analysis I
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
MATH 448-4 Network Flows
STAT 300-3 Statistics Communication
STAT 380-3 Introduction to Stochastic Processes
STAT 400-3 Data Analysis
STAT 410-3 Statistical Analysis of Sample Surveys
STAT 430-3 Statistical Design and Analysis of Experiments
STAT 460-3 Bayesian Statistics

Honors Program

• Under University regulations, an honors degree requires completion of a minimum of 60 upper division credit hours in courses numbered 300 and above, including at least 50 upper division credit hours in the honors program, and completion of at least 132 credit hours. Honors students require a graduation GPA of not less than 3.00.
• Students must complete all of the requirements as specified above for the degree with the major program. In addition, the student must complete the following upper division courses.

both of

CMPT 405-3 Design and Analysis of Computing Algorithms
STAT 330-3 Introduction to Mathematical Statistics

and one of

MATH 309-3 Continuous Optimization
MATH 408-3 Continuous Optimization
MATH 445-3 Graph Theory
MATH 448-3 Network Flows

• Students must also complete at least three credit hours in business administration or in economics at the 400 division.

Note: Students who wish to combine the MSSC honors program with another major or minor should consult with the MSSC program co-ordinator.

Recommended Upper Division Courses

For the list of recommended upper division courses, see “Recommended Courses” on page 221 (above).

Department of Mathematics

K10512 Shrum Science Centre, 778.782.3331/3332
Tel, 778.782.4947 Fax, www.math.sfu.ca

Chair
T. Archibald

Professors Emeriti
B.R. Alspach BA (Wash), MA, PhD (Calif)
J.L. Berggren BS, MS, PhD (Wash)
G. Bojadziev PhD (Sofia Mech Eng Inst)
T.C. Brown BA (Reed), AM, PhD (Wash, Mo)
A. Das BSc, MSc (Cal), PhD (University Coll, Dublin), DSc (Calc)
R. Harrop BA, MA, PhD (Cam)
A.H. Lachlan BA, MA, PhD (Camb), FRSC
R.W. Landner BA, PhD, ScD (Camb)
N.R. Reilly BSc, PhD (Glas)
C.Y. Shen BS, MS, PhD (Oregon State)
M. Singh AB, MA (Pun, India), MSc, PhD (Brown)
S.K. Thomson BS (Oregon), PhD (Cornell)
B.S. Thomson BSc (Tok), MA, PhD (Wat)

Professors
T. Archibald

Assistant Professors
C. Chauve Maîtrise, DEA, PhD (Bordeaux)
i. Chen BSc (Qiu), DPhil (Oxf)
K.K.S. Choi BSc, MPH (HK), PhD (Texas)
R. Choksi BSc (Tor), MS, PhD (Brown)
J. Jedwab BA (Camb), PhD (Lond)
M.C.A. Kropinski BSc (Qu), MMath (Wat), PhD (Rensselaer)
P. Lisonnek MSc (Palacky), PhD (J Kepler)
M.B. Monagan BSc (Massey), MMath, PhD (Wat)
D. Muraki BSc, MSc (CalTech), PhD (Northwestern)
S. Ruuth BMath (Wat), MSc, PhD (Br Col)
L. Stacho MSc, PhD (Slovak Acad Sc)
J. Stockie BMATH (Wat), PhD (Br Col)
M.R. Trummer PhD (Zur)

Adjunct Professors
J. Bell BSc (Wat), MSc (McG), PhD (Calif)
N. Bruin PhD (Leiden)
R. Feretac BSc (laus), MSc (Bucharest), PhD (Cal Tech)
Y. Lee MSc, PhD (Brown)
Z. Lu BSc (Anhui), MSc (Xian Jiaotong), MSc (Alabama), PhD (Georgia IT)
M. Mishra BMath (Wat), MSc (S Fraser), PhD (UQAM)
A.M. Oberman BSc (Tor), MSc, PhD (Chic)
T. Stephen BMath, (Wat), PhD (Mich)
R. Witterberg BSc (Natal), MSc (Cape Town), PhD (Prin)
J.F. Williams MSc (S Fraser), PhD (Bath)

Simon Fraser University 2007 • 2008 Calendar
Computing Recommendation
Some experience with a high level programming language is recommended by the beginning of the second year.

Open Workshops
Some introductory and service courses are organized through the department's open workshops. In addition to regularly scheduled lectures, students enrolled in these courses are encouraged to come to the workshops for assistance anytime during posted working hours. At the workshop students have the opportunity to meet with the co-ordinator, teaching assistants and other students, and work together to understand mathematics in a friendly and helpful environment.

Burrnday campus
Quantitative Courses Support Workshop (4100 Academic Quadrangle) – Fan X99, math 190
Algebra Workshop (4135 Academic Quadrangle) – math 100, 232, 240, macm 201
Calculation Workshop (4110 Academic Quadrangle) – math 150, 151, 152, 251
Applied Calculus Workshop (K9503 Shrum Science Centre) – Math 154, 155, 157, 158

Simon Fraser University Surrey
Introductory Mathematics Workshop – Fan X99, Math 100, 130, 190, Macm 201
Pure Calculus Workshop – Math 150, 151, 152, 251
Applied Calculus and Algebra Workshop – Math 154, 155, 157, 232, 240

Beginning Level Requirements
Students who do not have the appropriate prerequisites as listed below must successfully complete the Quantitative Placement Test in order to enroll in a mathematics course.

Students who are unsure of their level of preparation, or who completed their last mathematics course more than five years ago, are strongly encouraged to take the Quantitative Placement Test. Students should make certain that they discuss the test results with the appropriate advisor. Contact the Department of Mathematics general office for information.

The prerequisites for the first mathematics courses are as follows.

MATH 100, 113, 190
BC principles of mathematics 11 (or equivalent) with a grade of at least 70% or fan 099 with a grade of at least C, or achieving a satisfactory grade on the Simon Fraser University Quantitative Placement Test.

MATH 150, 151, 154, 157
BC principles of mathematics 12 (or equivalent) with a grade of at least B; or MATH 100 with a grade of at least C, or achieving a satisfactory grade on the Simon Fraser University Calculus Readiness Test.

Non-specialist MATH Courses
The following courses are intended to be particularly accessible to students who are not specializing in mathematics: MATH 100, 113, 121, 160, 178, 190, 197, 198, and 380.

Applied Mathematics Major Program
Applied mathematics traditionally consists of areas of mathematics which are closely related to the physical sciences and engineering, but nowadays sophisticated mathematical tools are used across many disciplines, and applied mathematics has become increasingly computationally oriented. The Department of Mathematics offers applied mathematics major and honors programs; applied mathematics courses are also excellent choices for students concentrating in other sciences or engineering. Students interested in applied mathematics may also wish to consider the joint honors program in mathematics and computer science, and the mathematical physics honors program, both of which include a substantial number of applied mathematics courses.

Required courses are as follows.

Lower Division Requirements
Students must complete either
CMPT 126-3 Introduction to Computer Science and Programming or both of
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
and all of
MACM 202-4 Mathematical Modeling and Computation
Math 152-3 Calculus II
Math 240-3 Algebra I Linear Algebra
Math 242-3 Introduction to Analysis I
Math 251-3 Calculus III
Math 252-3 Vector Calculus
PHYS 211-3 Intermediate Mechanics
STAT 270-3 Introduction to Probability and Statistics
and one of
Math 150-4 Calculus I with Review
Math 151-3 Calculus I
and one of
PHYS 120-3 Modern Physics and Mechanics
PHYS 125-3 Mechanics and Special Relativity
and one of
PHYS 121-3 Optics, Electricity, and Magnetism
PHYS 126-3 Electricity, Magnetism and Light

Note: With a grade of C or better in the relevant course, the following substitutions are permitted:
Math 154 or 157 for Math 151 or 150; Math 155 or 158 for Math 152. However, where possible, students should take Math 151 (or 150) and 152. A grade of C- or higher in MATH 242 is required for admission to the Applied Mathematics major and honors programs.

Upper Division Requirements
all of
MACM 316-3 Numerical Analysis I
Math 310-3 Introduction to Ordinary Differential Equations
Math 314-3 Boundary Value Problems
Math 320-3 Introduction to Analysis II
Math 322-3 Complex Variables
Math 418-3 Partial Differential Equations
plus at least one of
Math 461-3 Continuos Mathematical Models
Math 462-3 Fluid Dynamics
plus at least two of
MACM 401-3 Introduction to Computer Algebra
MACM 416-3 Numerical Analysis II (or Math 416)
Math 308-3 Linear Optimization
Math 309-3 Continuous Optimization
Math 338-3 Advanced Linear Algebra
Math 343-3 Applied Discrete Mathematics
Math 345-3 Introduction to Graph Theory
Math 419-3 Linear Analysis
Math 424-3 Applications of Complex Analysis
Math 425-3 Real Analysis
Math 462-3 Fluid Dynamics
Math 467-3 Dynamical Systems
Math 461-3 Continuos Mathematical Models
Math 470-3 Variational Calculus
MATH 495-3 Topics in Applied Mathematics
PHYS 413-3 Advanced Mathematics
PHYS 395-3 Computational Physics
PHYS 484-3 Nonlinear Physics
STAT 380-3 Introduction to Stochastic Processes

Two additional upper division courses in MATH or
MACM or any pre-approved quantitative upper
division courses offered by the Faculties of Applied
Sciences, Arts and Social Sciences, Business
Administration or Science. For this purpose a course,
if not MATH or MACM, must be pre-approved by a
department advisor. Students are encouraged to
explore the option of taking courses outside the
department and should discuss possibilities with a
department advisor.

Choices from the fourth group ("at least six of") must
not include the courses used to satisfy the second
group ("at least one of"). At least five of the courses
used to satisfy the upper division requirements must
be at the 400 division.

Other Requirements
Of the total 120 credit hours required for the major, at
least 12 must be taken outside the Faculty of Science
including at least six in the Faculty of Arts and Social
Sciences. At least 44 of the credit hours must be at
the upper division. In the courses used to satisfy the
upper division requirements, a grade point average
(GPA) of at least 2.00 is required. In addition,
University regulations require a cumulative GPA of at
least 2.00 and an upper division GPA of at least 2.00.
These averages are computed on all courses taken at
the University. See "Grade Point Averages Needed
for Graduation" on page 35.

Applied Mathematics
Honors Program

Lower Division Requirements
Students must complete either
CMPT 125-3 Introduction to Computing Science and
Programming
or both of
CMPT 125-3 Introduction to Computing Science and
Programming
CMPT 125-3 Introduction to Computing Science and
Programming II
and all of
CMPT 225-3 Data Structures and Programming
MACM 202-4 Mathematical Modeling and
Computation
MATH 152-3 Calculus II
MATH 240-3 Algebra I: Applied Linear Algebra
MATH 242-3 Introduction to Analysis II
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
PHYS 125-3 Mechanics and Special Relativity
PHYS 126-3 Electricity, Magnetism and Light
PHYS 211-3 Intermediate Mechanics
STAT 270-3 Introduction to Probability and Statistics

Other Requirements
Of the total 132 credit hours required for honors, at
least 12 must be taken outside the Faculty of Science
including at least six in the Faculty of Arts and Social
Sciences, Business Administration or Science. For this purpose a course,
if not MATH or MACM, must be pre-approved by a
department advisor. Students are encouraged to
explore the option of taking courses outside the
department and should discuss possibilities with a
department advisor.

Choices from the fourth group ("at least six of") must
not include the courses used to satisfy the second
group and third groups ("at least one of"). At least five of the
courses used to satisfy the upper division
requirements must be at the 400 division.

Industrial Mathematics Major and
Honors Program
Advisors
Dr. M. Monagan, K10501 Shrum Science Centre,
778.782.4279/5617, monagan@cecm.sfu.ca
Dr. A. Punnen, Room 94–250 Central City, Simon
Fraser University Surrey, 778.782.7611,
apunnen@sfu.ca
Dr. J.F. Williams, K10524 Shrum Science Centre,
778.782.4544, jfw@math.sfu.ca
This program prepares students for careers in
industry. Students choose a program area from either
operations research (offered at the Simon Fraser
University Surrey), scientific computing or discrete
mathematics (both offered at the main campus).

In addition to the program requirements set out below,
general university and Faculty of Science regulations
must be met.

Major Program
The requirements are divided into three parts: a core
that is common for all students, an area requirement
and a minor requirement. The lower division
requirements total 31-34 credit hours and the upper
division requirements total 34 credit hours. The minor
requirement is in addition to those already specified,
and is stipulated by the relevant department or
school.

Lower Division Core Requirements
Students must complete either
CMPT 126-3 Introduction to Computer Science and
Programming
or both of
CMPT 120-3 Introduction to Computer Science and
Programming I
CMPT 125-3 Introduction to Computer Science and
Programming II
plus all of
CMPT 225-3 Data Structures and Programming
MACM 101-3 Discrete Mathematics I
MACM 202-4 Mathematical Modeling and
Computation
MATH 152-3 Calculus II
MATH 240-3 Algebra I: Linear Algebra
MATH 251-3 Calculus III
STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics
and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
*with a grade of C or better, these substitutions are
permitted MATH 154 or 157 for 151 (or 150); MATH
155 or 158 for 152

Upper Division Core Requirements
Students must complete all of
MACM 316-3 Numerical Analysis I
MATH 308-3 Linear Optimization
MATH 310-3 Introduction to Differential Equations
MATH 402-4 Industrial Mathematics

Area Requirement
Students must complete the requirements for one of
option A, B or C.

Option A: Operations Research
(offered at Simon Fraser University Surrey)
Students must complete all of
MACM 201-3 Discrete Mathematics II
MATH 309-3 Continuous Optimization
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
MATH 348-3 Probabilistic Models in Operations
Research
MATH 408-3 Discrete Optimization
MATH 448-3 Network Flows
plus one additional course from Table I below.

Option B: Scientific Computing
(offered at the main campus in Burnaby)
Students must complete all of
MATH 252-3 Vector Calculus
MATH 314-3 Boundary Value Problems
MATH 418-3 Partial Differential Equations
MATH 493-3 Numerical Linear Algebra and
Optimization
plus two of
MATH 309-3 Continuous Optimization
MATH 320-3 Introduction to Analysis II
MATH 322-3 Complex Variables
MATH 462-3 Fluid Dynamics
MATH 467-3 Dynamical Systems
MATH 470-3 Variation Calculus
MACM 416-3 Numerical Analysis II
plus two additional courses from Table I below.  
Option C: Discrete Mathematics
( Offered at the main campus in Burnaby)
Students must complete all of
MACM 201-3 Discrete Mathematics II
MATH 340-3 Algebra II: Rings and Fields
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
plus two of
MATH 408-3 Discrete Optimization
MATH 447-4 Coding Theory
MACM 401-3 Introduction to Computational Algebra
MACM 442-3 Cryptography
plus two additional courses from Table I below.  
Table I Industrial Mathematics Courses
CMPT 305-3 Computer Simulation and Modelling
CMPT 307-3 Data Structures and Algorithms
CMPT 361-3 Introduction to Computer Graphics
CMPT 405-3 Design and Analysis of Computing Algorithms
CMPT 461-3 Advanced Computer Graphics
MACM 316-3 Numerical Analysis I
MACM 401-3 Introduction to Computational Algebra
MACM 416-3 Numerical Analysis II
MACM 442-3 Cryptography
MACM 408-3 Numerical Linear Algebra and Optimization
MATH 308-3 Linear Optimization
MATH 309-3 Continuous Optimization
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 314-3 Boundary Value Problems
MATH 320-3 Introduction to Analysis II
MATH 322-3 Complex Variables
MATH 338-3 Advanced Linear Algebra
MATH 340-3 Algebra II: Rings and Fields
MATH 342-3 Elementary Number Theory
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
MATH 348-3 Probability Models in Operations Research
MATH 402-4 Industrial Mathematics Project
MATH 408-3 Discrete Optimization
MATH 418-3 Partial Differential Equations
MATH 438-3 Linear Algebra
MATH 443-3 Combinatorial Theory
MATH 445-3 Graph Theory
MATH 447-4 Coding Theory
MATH 448-3 Network Flows
MATH 461-3 Continuous Mathematical Models
MATH 462-3 Fluid Dynamics
MATH 467-3 Dynamical Systems
MATH 470-3 Variational Calculus
PHYS 395-3 Computational Physics

Minor Requirement
Students must complete the requirements for either a minor in economics, engineering or computing science, or any minor offered by the Faculty of Science (e.g., biological sciences, chemistry, earth science, physics, statistics).
Students must be accepted into the minor program of the relevant department or school.
Upper division courses used to satisfy the major requirements cannot also be used to satisfy the minor requirement.
If the industrial mathematics major is completed as part of a second bachelor’s degree, then the minor requirement may be waived if the student’s previous degree contains an approved major. Approvals will be given on an individual basis and those majors that are approved will not be limited to the disciplines listed in the minor requirement.
Other Requirements
Students must complete the Faculty of Science requirements for a major as outlined on page 209. Computing courses that are completed as part of the industrial mathematics major program will count towards the 12 credit hour requirement from subjects outside of the Faculty of Science.
Honors Program
Students must satisfy the requirements for the major program, and complete an additional course work (see below) for a total of 132 credit hours.
Students must complete both of
MATH 242-3 Introduction to Analysis I
MATH 332-3 Introduction to Applied Algebraic Systems
and complete additional courses from Table I as shown above to complete a total of at least 48 upper division credit hours, of which at least four courses must be at the 400 division. One upper division MATH course that is not shown in Table I may be substituted.
Students must also fulfill the Faculty of Science general requirements for an honors as outlined on page 209. Note that the only requirement listed there which is not already met by the industrial mathematics honors program (including the minor requirement) as shown above is the minimum grade point average requirement of 3.00 in the subject area.
Co-operative Education
Students in the Industrial Mathematics Program are encouraged to enter co-operative education, a program which integrates work experience with academic study. The advantage of augmenting academic studies with co-op work/study has been strongly endorsed by representatives from industry. To obtain a co-op designation for the degree, students are required to complete four co-op work terms while completing the academic requirements for the degree. See “Co-operative Education” on page 237.
Mathematics Major and Honors Programs

Lower Division Requirements
Students must complete either
CMPT 126-3 Introduction to Computer Science and Programming
or both of
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
and all of
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MACM 202-4 Mathematical Modeling and Computation
MATH 152-3 Calculus II
MATH 240-3 Algebra I: Linear Algebra
MATH 242-3 Introduction to Analysis I
MATH 251-3 Calculus III
STAT 270-3 Introduction to Probability and Statistics
and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
Note: With a C grade or better in the relevant course, these substitutions are permitted: MATH 154 or 157 for MATH 150 or 151, MATH 156 or 158 for MATH 152. However, where possible, students should take MATH 150 or 151, and 152. A grade of C- or higher in MATH 242 is required for admission to the mathematics major or honors programs.
Upper Division Requirements
All students must complete
MATH 340-4 Algebra II: Rings and Fields
and at least one from the following four groups of courses.
MATH 308-3 Linear Optimization
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
and one of
MATH 320-3 Introduction to Analysis II
MATH 322-3 Complex Variables
and one of
MATH 338-3 Advanced Linear Algebra
MATH 341-3 Algebra III: Groups
MATH 342-3 Elementary Number Theory
and one of
MATH 310-3 Introduction to Ordinary Differential Equations
MACM 316-3 Numerical Analysis I
BSc mathematics majors must obtain at least 30 credit hours in upper division mathematics (MATH), or mathematics/computing science (MACM), or PHYS 413, or from the following list of statistics (STAT) and actuarial mathematics (ACMA) courses: ACMA 310, STAT 330, 350, 380, 402, 430, 450 and 460.
Of the required 30 credit hour minimum total for the MATH major, at least 24 must be MATH or MACM courses. At least three used for this requirement must be at the 400 division, of which at least two must be 400 division MATH or MACM. A directed studies, job practicum, or honors essay course cannot be used to fulfill the 400 division requirement.
Honors Program Specific Requirements
In addition to the requirements for the major program, honors students must take CMPT 225, MATH 252 and 341, and obtain at least 15 additional credit hours in upper division mathematics (MATH), or mathematics/computing science (MACM) courses, PHYS 413, or from the list of approved STAT and ACMA courses listed under Upper Division Requirements for the Mathematics Major Program. Of this minimum 48 upper division credit hours, at least 36 must come from MATH or MACM courses.
At least five of the courses used to satisfy the 48 credit hour requirement must be at the 400 division, of which at least three must be 400 division MATH or MACM courses. Students may not use a directed studies, job practicum or honors essay course to fulfill the 400 division requirement.
Note: Major or honors mathematics students are advised to take an upper division statistics course and an upper division MACM or CMPT course.
Major and Honors Program Electives
Students must obtain at least six credit hours in courses offered by the Faculty of Science outside the Department of Mathematics and the Department of Statistics and Actuarial Science. Students must obtain at least six credit hours in Faculty of Arts and Social Sciences courses. (The two required CMPT courses and the six credit hour requirement in Faculty of Arts and Social Sciences courses fulfill the Faculty of Science requirement that students take 12 credit hours from outside the Faculty of Science.)
Major program students must complete at least 44 upper division credit hours, including the requirements for the major. Honors program students must complete at least 60 upper division credit hours, including the requirements for honors.
Mathematics Minor Program
Students completing a minor in mathematics are subject to the general regulations of the faculty in

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Mathematics and Computing Science (MACM) Major and Honors Program

MACM major and honors programs are offered co-operatively by the Department of Mathematics and the School of Computing Science. In general, students are expected to meet the requirements of both the department and the school with respect to admission, continuation and graduation requirements.

Lower Division Requirements – MACM Major

Students must complete either CMPT 125-3 Introduction to Computer Science and Programming or both of CMPT 120-3 Introduction to Computing Science and Programming I, CMPT 125-3 Introduction to Computing Science and Programming II and all of CMPT 125-3 Introduction to Computer Design, CMPT 225-3 Data Structures and Programming, MACM 101-3 Discrete Mathematics I, MACM 201-3 Discrete Mathematics II, MATH 152-3 Calculus II, MATH 240-3 Algebra I: Linear Algebra, MATH 242-3 Introduction to Analysis, MATH 251-3 Calculus III, STAT 270-3 Introduction to Probability and Statistics plus one of MATH 150-4 Calculus I with Review, MATH 151-3 Calculus I plus one of CMPT 275-4 Software Engineering, MACM 202-4 Mathematical Modeling and Computation.

In addition, students must complete writing and breadth requirements in accordance with the regulations of both the department and the school.

Lower Division Requirements – MACM Honors

Students pursuing the MACM honors program must complete both of the following courses as well as the remaining requirements of the MACM major.

CMPT 275-4 Software Engineering, MACM 202-4 Mathematical Modeling and Computation

Upper Division Requirements – MACM Major

Students must complete the following core requirements.

All of CMPT 307-3 Data Structures and Algorithms, MACM 316-3 Numerical Analysis I, MATH 340-3 Algebra II: Rings and Fields plus one of CMPT 300-3 Operating Systems I, CMPT 371-3 Data Communications and Networking, CMPT 379-3 Principles of Compiler Design plus one of MATH 308-3 Linear Optimization

MATH 310-3 Introduction to Ordinary Differential Equations, MATH 345-3 Introduction to Graph Theory

Additional work is required to total 21 upper division MATH and 24 upper division CMPT credit hours including core requirements. MACM courses are counted in an alternating fashion towards the MATH and CMPT requirements, starting with the first MACM course taken, counting toward either MATH or CMPT. Twelve credit hours must be 400 division or higher, including at least three credit hours each of CMPT and MATH.

Upper Division Requirements – MACM Honors

Students must complete these core requirements. All of CMPT 307-3 Data Structures and Algorithms, CMPT 405-3 Design and Analysis of Computing Algorithms, MACM 316-3 Numerical Analysis I, MATH 310-3 Introduction to Ordinary Differential Equations, MATH 340-3 Algebra II: Rings and Fields, MATH 345-3 Introduction to Graph Theory, plus one of CMPT 308-3 Computability and Complexity, MACM 300-3 Introduction to Formal Languages and Automata with Applications, plus one of CMPT 300-3 Operating Systems I, CMPT 371-3 Data Communications and Networking, plus one of CMPT 361-3 Introduction to Computer Graphics, CMPT 379-3 Principles of Compiler Design, plus one of MATH 308-3 Linear Optimization, MATH 309-3 Continuous Optimization

Additional course work is required to total 27 upper division MATH credit hours and 30 upper division CMPT credit hours including core requirements. MACM courses are counted in an alternating fashion towards the MATH and CMPT requirements, starting with the first MACM course taken, counting toward either MATH or CMPT. A total of 18 credit hours must be taken at the 400 division or higher, including at least six credit hours each of MATH and CMPT credit.

Mathematical Physics Honors Program

This program, offered jointly with the Department of Physics, consists of theoretical and laboratory physics and applied and pure mathematics courses. See page 231 for details.

Co-operative Education

This program integrates work experience with academic study. See “Co-operative Education” on page 237. Contact the mathematical sciences co-op coordinator at 778.782.4123, K10558, for admission requirements and information.

Department of Molecular Biology and Biochemistry

8166 South Science Building, 778.782.5630 Tel, 778.782.5583 Fax, www.sfu.ca/mbb

Chair
B.P. Brandhorst AB (Harv), PhD (Calif)

Professors Emeriti
R.J. Cushley BSc, MSc, PhD (Alta)
W.R. Richards AB, PhD (Calif)

M.J. Smith BSc (St Mary’s), PhD (Br Col)

Professors
D.L. Ballie BSc, MSc (Br Col), PhD (Conn), Canada Research Chair
B.P. Brandhorst AB (Harv), PhD (Calif)
R.B. Cornell BS (Houghton), PhD (Penn)*
W.S. Davidson BSc (Edin), PhD (Qu)
B.M. Honda BSc (McM), PhD (Br Col)
J.K. Scott AB (Occidental), MD (St Louis), PhD (Missouri), Canada Research Chair**
D. Sen BA (Cam), MPhil, PhD (Yale)*

Associate Professors
F.S.L. Brinkman BSc (Wat), PhD (Ott)
N.J. Chen BSc (Fudan), MSS (Br Col), PhD (Chin Acad Sc)

Professors
M.R. Leroux BSc (McG), PhD (Br Col)
L.M. Quarmby BSc, MSc (Br Col), PhD (Conn)

Adjunct Professors
T.J. Borgford BSc, PhD (Manit)
S.M. Gorski BSc (Fraser), MSc (Br Col), PhD (Wash, Mo)

L. Craig BSc (Br Col), MSc, PhD (S Fraser)

N.C. Hawkins BSc, MSc (Calg), PhD (Prin)

W.M. Paetzel BSc (Syr), BSc (Minn), PhD (Ohio State)

F.F. Pio BSc, MSc (C Ferrand), PhD (Lille)

B.P. Brandhorst AB (Harv), PhD (Calif)

E.C. Young BSc (Tor), PhD (Brandes)

Chairs
A.T. Beckenbach, Biological Sciences
A.J. Bennet, Chemistry
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B.P. Brandhorst AB (Harv), PhD (Calif)

S. Friesr BSc (Wat), PhD (McG)**

I.V. Kovalyova MA (Brown), PhD (Qu)

E. S. Sinclair BSc, MSc (Manit), PhD (Br Col)

Lecturers
F. Breden, Biological Sciences

E. Emberly, Physics

N. Ford, Physics

N.H. Haunderland, Biological Sciences

C. Krieger, Kinesiology

R. Holt BSc (Br Col), PhD (S Fraser)

T.J. Borgford BSc, PhD (Manit)

S. Jones BSc (Brist), MSc (S Fraser), PhD (Sanger)

M. Marra BSc, PhD (S Fraser)

D.L. Baillie BSc, MSc (Minn), PhD (Conn)

N.R. Branda, Chemistry

L. Craig BSc (Br Col), MSc, PhD (S Fraser)

N.C. Hawkins BSc, MSc (Calg), PhD (Prin)

W.M. Paetzel BSc (Syr), BSc (Minn), PhD (Ohio State)

S. Friesr BSc (Wat), PhD (McG)**

I.V. Kovalyova MA (Brown), PhD (Qu)

E. S. Sinclair BSc, MSc (Manit), PhD (Br Col)

Lecturers

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Prerequisite Grade
For a course to be accepted as fulfilling a prerequisite for any upper division MBB course, a student must have obtained a minimum grade of C.

Research and Directed Reading Courses
For credit towards a molecular biology and biochemistry major degree, students are limited to a maximum of nine credit hours of undergraduate (or graduate) research courses and/or directed reading courses. For credit towards obtaining an MBB honors degree, students are limited to a maximum of 18 credit hours of undergraduate (or graduate) research courses and/or directed reading courses. These would include courses such as MBB 490, 491, 492, 493, 497, 872, 873 as well as corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 498, 499, 888, 889, 890).
If students take more than nine (for the major program) or 18 (for the honors) credit hours of these courses, they may not apply these extra credit hours toward the total required for a degree (120 for the major and 132 for an honors respectively). In addition, honors students may not take more than 15 credit hours of research and/or reading courses in one term.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Major Program
(120 credit hours)
All students must complete lower and upper division requirements.

Lower Division Core Requirements
(52-53 credit hours)
Students must complete all of BISC 101-4 Introduction to Biology
BISC 102-4 Introduction to Biology

BISC 202-3 Genetics
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
CHEM 288-2 Organic Chemistry Laboratory II
MBB 221-3 Cell Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry

and one of
CMPT 102-3 Introduction to Scientific Computer Programming
CMPT 110-3 Event-Driven Programming in Visual Basic
CMPT 120-3 Introduction to Computing Science and Programming I
one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
and one of
PHYS 101-3 General Physics I
PHYS 120-3 Modern Physics and Mechanics
one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Upper Division Core Requirements
(22 credit hours)
Students must complete all of
MBB 308-3 Molecular Biology and Biochemistry Laboratory I
MBB 308W-4 Molecular Biology and Biochemistry Laboratory II
MBB 321-3 intermediary Metabolism
MBB 322-3 Molecular Physiology
MBB 331-3 Molecular Biology
and one of
CHEM 360-3 Chemical Kinetics and Thermodynamics
MBB 323-3 Introduction to Physical Biochemistry
and one of
MATH 310-3 Introduction to Ordinary Differential Equations
STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

Students must complete a minimum of five courses from the following list which must include a minimum of one as indicated by # and a minimum of one as indicated by *. There is no upper limit on the quantity in the following list that can completed.

MBB 402-3 Molecular Genetics
MBB 403-3 Physical Biochemistry
MBB 412-4 Enzymology
MBB 420-3 Special Topics in Biochemistry
MBB 421-3 Nucleic Acids#
MBB 422-3 Biomembranes#
MBB 423-3 Protein Structure and Function#
MBB 426-3 Immunology
MBB 432-3 Advanced Molecular Biology Techniques
MBB 435-3 Genomic Analysis*
MBB 436-3 Gene Expression
MBB 437-3 Selected Topics in Signal Transduction
MBB 438-3 Human Molecular Genetics
MBB 440-3 Special Topics in Molecular Biology
MBB 441-3 Bioinformatics#
MBB 442-3 Proteomics*
MBB 443-3 Protein Biogenesis and Degradation#

In addition to the above, students must complete enough electives to total 120. Of these 120 credit hours:

• 44 must be upper division
• 12 must be from outside the Faculty of Science, fulfilled as follows: six credit hours from the Faculty of Arts and Social Sciences (excluding EDUC 401-406). Note that Faculty of Applied Sciences courses may be used.

In addition, students should consult the Bachelor of Science regulations in Faculty of Science. See “Requirements for Major” on page 209.
Although many variations are possible, those with BC high school chemistry 12, mathematics 12 and physics 12 (or equivalents) might take the following typical program:
Levels 1 and 2
BISC 101-4 and 102-4
CHEM 121-4, 122-2, and 281-4
MATH 151-3 and 152-3
PHYS 120-3 and 121-3
Total 30 credit hours

Levels 3 and 4
BISC 202-3
CHEM 126-2, 282-2, 288-2 and 215-4
CMPT 102-3 or 110-3
MBB 221-3 and 222-3
6 hours of electives
Total 26 credit hours

Levels 5 and 6
MBB 331-3
CHEM 360-3 or MBB 332-3
MATH 310-3 or STAT 201-3 or STAT 270-3
MBB 308-3, 309W-3, 321-3 and 322-3
MBB 432-3
9 hours of electives
Total 34 credit hours

Levels 7 and 8
15-18 credit hours
11-16 credit hours of electives
Total 29-31 credit hours

Honors Program
(132 credit hours)
A minimum 3.0 CGPA, 3.0 upper division GPA, and permission of the department is required for admission. In addition to the major program requirements, MBB honors complete one of the following individual study term options.
either
MBB 493-15 Individual Study Semester (Option B) or both of
MBB 491-5 Undergraduate Research
MBB 492-10 Individual Study Semester (Option A) *
*This may be accomplished by breaking the individual study term project into two consecutive terms.
Students must take 12 credit hours outside the Faculty of Science (including six hours in the Faculty of Arts and Social Sciences, but excluding EDUC 401 to 406) and at least 60 upper division credit hours. See “Requirements for Major” on page 209.

Minor Program
(56-60 credit hours minimum)

Lower Division Requirements
(42 credit hours minimum)
Students must complete all of
BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CHEM 215-4 Introduction to Analytical Chemistry
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
CHEM 288-2 Organic Chemistry Laboratory II
MBB 221-3 Cell Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry

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and one of

MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
and one of
PHYS 101-3 General Physics I
PHYS 120-3 Modern Physics and Mechanics
and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Cumulative Grade Point Average Requirement
To be approved in an MBB minor program, students must meet the same criteria as is required for the MBB major program with the exception of BISC 202 which is not required for an MBB minor.

Upper Division Requirements
(14-18 credit hours)
Students must complete five upper division MBB courses (plus any lower division prerequisites) excluding MBB 492 and 493.

Joint Major in Computing Science and Molecular Biology and Biochemistry
The School of Computing Science and the Department of Molecular Biology and Biochemistry co-operate in offering this joint major program.

The student enrollment, appeals, and graduation processing are handled by either the School of Computing Science in the Faculty of Applied Sciences or the Department of Molecular Biology and Biochemistry in the Faculty of Science.

Lower Division Requirements
(72 credit hours, or 75 credit hours if CMPT 120 and 125 are taken)
Students must complete
MATH 151-3 Calculus I (or MATH 150)
MATH 152-3 Calculus II
PHIL 100-3 Knowledge and Reality
STAT 270-3 Introduction to Probability and Statistics
plus one additional arts course chosen from
ARCH 105-3 The Evolution of Technology
CMNS 110-3 Introduction to Communication Studies
CMNS 130-3 Explorations in Mass Communication
CNS 160-3 The Social Background of Canada
CRIM 101-3 Introduction to Criminology
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
HIST 106-3 Western Civilization from the Reformation Era to the 20th Century
POL 100-3 Introduction to Politics and Government
PSYC 100-3 Introduction to Psychology I
REM 100-3 Global Change
SA 101-4 Introduction to Anthropology (A)
SA 150-4 Introduction to Sociology
WS 101-3 Introduction to Women’s Issues in Canada
plus one of
PHYS 101-3 General Physics I
PHYS 120-3 Modern Physics and Mechanics
plus one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Molecular Biology and Biochemistry Lower Division Requirements
Students must complete all of
BISC 101-4 General Biology
BISC 102-4 General Biology
BISC 202-3 Genetics
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry and Laboratory II
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
MBB 221-3 Cell Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry
Students are strongly encouraged to take CHEM 286.

Computing Science Lower Division Requirements
Students must complete
CMPT 126-3 Introduction to Computing Science and Programming
or both of
CMPT 120-3 Introduction to Computing Science and Programming I
CMPT 125-3 Introduction to Computing Science and Programming II
and all of
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
CMPT 275-4 Software Engineering
MACM 101-3 Discrete Mathematics II
MACM 201-3 Discrete Mathematics II
MATH 232-3 Elementary Linear Algebra

Upper Division Requirements
(48 credit hours)
STAT 302-3 Analysis of Experimental and Observational Data

Molecular Biology and Biochemistry Upper Division Requirements
Students must complete all of
MBB 308-3 Molecular Biology and Biochemistry Laboratory I
MBB 321-3 Intermediary Metabolism
MBB 331-3 Molecular Biology
MBB 441-3 Bioinformatics
plus at least two additional 400 division MBB courses.
The following courses are suggested.
MBB 423-3 Protein Structure and Function
MBB 435-3 Genomic Analysis
MBB 442-3 Proteomics

Computing Science Upper Division Requirements
CMPT 307-3 Data Structures and Algorithms
CMPT 320-3 Social Implications of a Computerized Society
CMPT 354-3 Database Systems and Structures
CMPT 441-3 Introduction to Computational Biology
MACM 316-3 Numerical Analysis
plus two courses from
CMPT 300-3 Operating Systems
CMPT 305-3 Computer Simulation and Modeling
CMPT 310-3 Artificial Intelligence Survey
CMPT 340-3 Computers in Biomedicine
CMPT 361-3 Introduction to Computer Graphics
CMPT 363-3 User Interface Design
plus at least two 400 division CMPT courses. The following courses are suggested.
CMPT 405-3 Design and Analysis of Computing Algorithms
CMPT 413-3 Computational Linguistics
CMPT 419-3 Special Topics in Artificial Intelligence
CMPT 454-3 Database Systems II

Joint Major in Molecular Biology and Biochemistry and Business Administration
This program offers in-depth combined training pertinent to development and administration in emergent biotechnology enterprises. Molecular biology and biochemistry form the scientific and technological underpinnings of today’s burgeoning biotechnology field while business administration teaches fundamentals of economics, management, marketing, investment and business law.

Students will take most of the required courses in both the Department of Molecular Biology and Biochemistry (MBB) and the Faculty of Business Administration (FBA). Upon program completion, students will graduate with a bachelor of science degree from the Faculty of Science.

The program requires 70 credit hours in MBB related courses and 52 credit hours in BUS related ones; there is little flexibility in curriculum scheduling.

Students are strongly encouraged to participate in the co-operative education program in which practical rotations in MBB and FBA will be available.

Lower Division Molecular Biology and Biochemistry Requirements
Students must complete all of
BISC 101-4 General Biology
BISC 102-4 General Biology
BISC 202-3 Genetics
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry and Laboratory II
CHEM 126-2 General Chemistry Laboratory II
CHEM 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
MBB 221-3 Cellular Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry
and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
and one of
PHYS 101-3 General Physics I
PHYS 120-3 Modern Physics and Mechanics
and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Students are strongly encouraged to take CHEM 286.

Lower Division Business Administration Requirements
Students must complete all of
BUS 254-3 Managerial Accounting I
BUS 272-3 Behavior in Organizations
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
and one of
BUEC 232-4 Data and Decisions I
STAT 270-3 Introduction to Probability and Statistics**
and one three-credit PHIL course.

Upper Division Molecular Biology and Biochemistry Requirements
Students must complete all of
BISC 303-3 Microbiology
MBB 300-1 Special Topics in Biotechnology and Business
MBB 308-3 Molecular Biology and Biochemistry Laboratory I
Undergraduate

MBB 309W-4 Molecular Biology and Biochemistry Laboratory II
MBB 321-3 Intermediary Metabolism
MBB 322-3 Molecular Physiology
MBB 331-3 Molecular Biology
and two of
MBB 423-3 Protein Structure and Function
MBB 426-3 Immunology
MBB 432-3 Advanced Molecular Biology Techniques
MBB 435-3 Genomic Analysis

Upper Division Business Administration Requirements
BUS 303-3 Business, Society and Ethics
BUS 312-4 Introduction to Finance
BUS 336-4 Data and Decisions II
BUS 345-3 Introduction to Marketing
BUS 360W-3 Business Communication
BUS 393-3 Commercial Law
BUS 477-4 New Venture Planning
and one of
BUS 347-3 Consumer Behavior
another marketing course
and one of
BUS 374-3 Organization Theory
BUS 381-3 Introduction to Human Resource Management

Joint Honors in Molecular Biology and Biochemistry and Business Administration
(132-133 credit hours)
Students must meet the criteria specified by each program (i.e., MBB and Faculty of Business Administration) for entering as an honors and must seek MBB permission. In addition to the major requirements, MBB/Business joint honors complete both of six credit hours of 400 division BUS or BUUC courses beyond those required for the joint major, and a minimum of six credit hours of research-related MBB courses, which can be fulfilled with MBB 496-6.

Grade Point Averages
For entry, continuation and graduation, the following GPAs will be used: minimum 3.00 cumulative GPA; minimum 3.00 GPA for upper division.

Co-operative Education
Molecular biology and biochemistry majors and honors may apply to the science co-operative education program which includes up to five work terms during the normal academic program. See “Co-operative Education” on page 237.

Physical Geography Program
7123 Robert C. Brown Hall, 778.782.3321 Tel, 778.782.5841 Fax, www.sfu.ca/geography
Advisor
Ms. R. Multani, 7126 Robert C. Brown Hall, 778.782.4529
See "Department of Geography" on page 161 for a complete list of faculty.

The Department of Geography offers a program within the Faculty of Science leading to a bachelor of science with a major or honors in physical geography. Students interested in a bachelor of arts in geography should see page 161 in the Faculty of Arts and Social Sciences section. Requirements for the bachelor of science in physical geography are set out below.

Students should contact the advising committee to plan the course work for recommended options: biogeography, climatology or geomorphology.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative, and Breadth Requirements" on page 7 for information.

Major Program

Lower Division Requirements
(52-55 credit hours)

Required Geography Courses
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
two of
GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Biogeography
one of
GEOG 221-3 Economic Geography
GEOG 241-3 Social Geography
one of
GEOG 250-3 Cartography I
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I
18 credit hours

Required Faculty of Science Courses
BISC 101-4 General Biology
BISC 102-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
EASC 101-3 Physical Geology
and one of
PHYS 101-3 General Physics I*
PHYS 120-3 Modern Physics and Mechanics
and one of
PHYS 102-3 General Physics II*
PHYS 121-3 Optics, Electricity and Magnetism
and one of
PHYS 130-2 General Physics Laboratory*
PHYS 131-2 Physics Laboratory I
and one of
STAT 270-3 Introduction to Probability and Statistics
STAT 201-3 Statistics for the Life Sciences
and one of
MATH 150-4 Calculus I
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
34-35 credit hours

* a minimum grade may be required for this course to serve as a prerequisite to certain Faculty of Science courses
See "Physics PHYS" on page 440 for possible Physics course substitutions.

Upper Division Requirements
(45 credit hours)

Required Geography Courses — 300 division
three of
GEOG 311-4 Hydrology I
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 317-4 Soil Science I
one of
GEOG 322-4 World Resources
GEOG 323-4 Industrial Location
GEOG 324-4 Geography of Transportation
GEOG 325-4 Geographies of Consumption
GEOG 327-4 Geography of Tourism
GEOG 362-4 Geography of Urban Development
GEOG 369-4 Human Microgeography
GEOG 381-4 Political Geography
GEOG 382-4 Population Geography
GEOG 383-4 Regional Development and Planning I
GEOG 385-4 Agriculture and the Environment
GEOG 386-4 Geography, Health and Health Care
GEOG 387-4 Geography and Gender
GEOG 388W-4 Human Ecology: Human Relations to Nature
one of
GEOG 301-4 Geographic Ideas and Methodology
GEOG 351-4 Cartography and Visualization
GEOG 352-4 Spatial Analysis
GEOG 353-4 Remote Sensing
GEOG 355-4 Geographical Information Science II
GEOG 356-4 Cognitive Geovisualization
20 credit hours

Required Geography Courses — 400 division
two of
GEOG 411-4 Hydrology II
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Geomorphology III
GEOG 414-4 Climatology III
GEOG 415-4 Advanced Biogeography
GEOG 416W-4 Pleistocene Geophysics
GEOG 417-4 Soil Science II
plus eight additional hours of upper division courses from any 300 or 400 division courses in geography
16 credit hours

Faculty of Science Courses
Students must complete a minimum of nine credit hours from 300-400 division BISC, CHEM, EASC, MATH, MBB, NUSC, PHYS or STAT courses.
9 credit hours
A student must take 44 upper division credit hours (excluding EDUC 401, 402, 405 and 406) and additional credit in any courses (excluding EDUC 401, 402, 405 and 406) to bring the total to 120 credit hours. See "Requirements for Major" on page 209.

Honors Program
This program is the same as the major except that it must include a minimum of 60 credit hours of 300-400 division courses, of which 48 must be in geography or other closely related Faculty of Science subjects approved by the Department of Geography. Students are strongly encouraged to seek Department of Geography advice in advance about suitability of courses.

GEOG 491 (Honors Essay) may be included in these 48 hours. The remaining 12 upper division credit hours must be from BISC, CHEM, EASC, MATH, MASC, MBB, NUSC, PHYS or STAT courses. A total of 132 credit hours is required and graduation GPAs of not less than 3.00. See “General Regulations” on page 36 and “Requirements for Honors and Honors First Class” on page 209. Honors program entry requires department approval.

Minor Program

Lower Division Requirements
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography
plus one of
GEOG 250-3 Cartography I
GEOG 253-3 Aerial Photographic Interpretation
GEOG 255-3 Geographical Information Science I
Upper Division Requirements
A minimum of 15 hours is required to be selected from the following or their equivalents.

GEOG 311-4 Hydrology I
GEOG 313-4 Geomorphology II
GEOG 314-4 Climatology II
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 317-4 Soil Science I
GEOG 411-4 Hydrology II
GEOG 412-4 Glacial Processes and Environments
GEOG 413-4 Geomorphology III
GEOG 414-4 Climatology III
GEOG 415-4 Advanced Biogeography
GEOG 416W-4 Pleistocene Geography
GEOG 417-4 Soil Science II

Co-operative Education
The geography Co-operative Education program integrates workplace learning with academic studies. Students alternate academic terms with four full-time paid work terms. Students are encouraged to apply to co-op as early as possible in their academic career to facilitate optimal scheduling.

To enter, physical geography students must have a minimum 2.75 cumulative grade point average (CGPA) and must maintain a 2.5 CGPA to continue. University and college transfer students who have already participated in co-op programs elsewhere may be credited with the term(s) already taken.

To enrol, students should attend a co-op information session held during the first week of classes every term, or visit the environmental co-op co-ordinator. For further information and contact details, visit http://www.sfu.ca/coop/science.

Professional Registration as a BC Geoscientist
The right to practise in and to accept professional responsibility for geoscience in BC is limited to registered members of the Association of Professional Engineers and Geoscientists of British Columbia (APEGB). Requirements for registration can be met through the physical geography BSc major program and selected courses in other university departments. Consult the undergraduate advisor in the Department of Geography for details.

Department of Physics
P8429 Shrum Science Centre, 778.782.4465 Tel, 778.782.3592 Fax, www.sfu.ca/physics

Chair
B.J. Frisken BSc (Qu), MSc (Northwestern), PhD (Br Col)

Professors Emeriti
A.S. Arrott BS (Carnegie Tech), MS (Penn), PhD (Carnegie Tech)
L.E. Ballentine BSc, MSc (Alta), PhD (Camb)
J.F. Cochran BSc, MA (Br Col), PhD (Ill)
K. Coibow BSc, MSc (McM), PhD (Br Col)
E.D. Crozier BSc (Tor), PhD (Cu)
A.E. Curzon BSc (Lond), MSc (Leeds), PhD (Lond), ARCS, DIC
R.H. Enns BSc, PhD (Alta)
R.F. Frintd BSc (Alta), PhD (Camb), PEng
S. Gypax Dri Phys, PhD (Zur)
B. Heinrich BSc, MSc (Prague), PhD (Czech Acad Sc)
D.J. Huntley BASc, MSoc (Br Col), DPhil (Oxf)

J.C. Irwin BASc, PhD (Br Col)
L.H. Palmer AA (Sacramento), AB, PhD (Calif)
K.E. Rieckhoff BSc, MSc, PhD (Br Col)
K.S. Viswanathan BSc (Mad), MA, PhD (Calif)
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Professors
J.L. Beckhofer AB (Harv), MSc, PhD (Chic)
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B.P. Clayman BSc (Rensseleer), PhD (C'nell)
B.J. Frisken BSc (Qu), MSc (Northwestern), PhD (Br Col)
I. Herbut BSc (Belgrade), MSc, PhD (Johns H)
K.L. Kavanagh BSc (Qu), PhD (Cornell)
G. Kirczenow BSc (WAust), DPhil (Oxf)
M. Pilschke BSc (Montr), MPhil (Yale), PhD (Yeshiva)
P. Mooney AB (Wilson), MA, PhD (Bryn Marrw), Canada Research Chair
M.L.W. Thewalt BSc (McM), MSc, PhD (Br Col)
H.D. Trottier BSc, MSc, PhD (McG)
M. Vetterli BSc (McG), MSc (McM)

Associate Professors
A.V. Frolow BSc, PhD (Alta)
P. Hajen BSc (Alta), PhD (Colorado)
M. Kennett BSc, MSc (Syd), PhD (Prin)
J. McQuirr BS (Texas), PhD (Stan)
D. O'Neill BSc (New Br), MSc (Alta), PhD (Vic BC)
L.E. Pogosian BSc (Yerevan), MSc (W/Virgin), PhD (Case W Reserve)

Adjunct Professors
B. Davids BSc (Chic), PhD (Mich State)
B.K. Jennings BS (Mont All), MSc, PhD (McM)
M.R. Scheinbein BS (MIT), MSc, PhD (Cornell)
R.M. Woloshyn BSc (Man), PhD (NY State)
M. Zuckermann BA, DPhil (Oxf)

Associate Members
M. Eikerling, Chemistry
D. E. Nelson, Archaeology

Senior Lecturers
N. Alberding BSc (MT), MSc, PhD (Cornell)
M. Chen BSc (Zhungshan, China), MA, PhD (C'NY)
A. DeBeneditics BSc (Br Col), MSc (Windsor), PhD (S Fraser)
S. Johnson BS (S Calif), MA, PhD (Roche)

Advisor
Dr. A. DeBeneditics BSc (Br Col), MSc (Windsor), PhD (S Fraser), P9446 Shrum Science Centre, 778.782.4369

"Joint appointment with biochemistry"
Students must complete all of MATH 310-3 Introduction to Ordinary Differential Equations and one of MATH 232-3 Applied Linear Algebra, MATH 240-3 Algebra I: Linear Algebra, and one of CHEM 260-4 Atoms, Molecules, Spectroscopy, PHYS 285-3 Introduction to Relativity and Quantum Mechanics.

Upper Division Requirements
(40 credit hours)
Students must complete all of MATH 310-3 Introduction to Ordinary Differential Equations, MBB 309-4 Molecular Biology and Biochemistry Laboratory II, MBB 322-3 Molecular Physiology, MBB 331-3 Molecular Biology, PHYS 321-3 Intermediate Electricity and Magnetism, PHYS 347-3 Introduction to Biological Physics, PHYS 385-3 Quantum Mechanics I, and one of CHEM 360-3 Thermal Dynamics and Chemical Kinetics, PHYS 323-3 Thermal Physics, and four other upper division MBB or PHYS courses. MATH 462 may be included amongst these four. The following courses are suggested.

BBB 308-3 Molecular Biology and Biochemistry Laboratory I, MBB 321-3 Intermediary Metabolism, MBB 403-3 Physical Biochemistry, MBB 413-2 Physical Biochemistry Laboratory, MBB 421-3 Nucleic Acids, MBB 422-3 Biomembranes, MBB 423-3 Protein Structure and Function, MBB 441-3 Bioinformatics, MBB 442-3 Proteomics, PHYS 492-3 Special Topics in Physics, PHYS 413-3 Advanced Mechanics, PHYS 455-3 Modern Optics, PHYS 484-3 Nonlinear Physics, MATH 462-3 Fluid Dynamics.

Chemical Physics Major Program
This program is offered jointly by the Departments of Chemistry and Physics. Entry requires permission of both. Students are strongly encouraged to take at least three lower division computing science credit hours.

Lower Division Requirements
(57 credit hours)
Students must complete all of CHEM 121-4 General Chemistry and Laboratory I, CHEM 122-4 General Chemistry I, CHEM 124-4 Organic Chemistry and Laboratory I, CHEM 282-2 Organic Chemistry II, MATH 151-3 Calculus I (or MATH 150), MATH 152-3 Calculus II, MATH 251-3 Calculus III, MATH 252-3 Vector Calculus, MBB 221-3 Cellular Biology and Biochemistry, MBB 222-3 Molecular Biology and Biochemistry, PHYS 101-3 or 120-3 or 125-3 or 140-4 Mechanics, PHYS 102-3 or 121-3 or 126-3 or 141-4 Electricity, Magnetism and Light, PHYS 130-2 or 131-2 Physics Laboratory I*, PHYS 211-3 Intermediate Mechanics, PHYS 231-3 Physics Laboratory II, and PHYS 255-3 Vibrations and Waves.

Upper Division Requirements
(40 credit hours)
Students must complete all of CHEM 340-3 Materials Chemistry, CHEM 366-2 Physical Chemistry Laboratory I, CHEM 462-3 Molecular Spectroscopy, MATH 310-3 Introduction to Ordinary Differential Equations, MBB 312-3 Intermediate Electricity and Magnetism, MBB 323-3 Thermal Physics, MBB 385-3 Quantum Mechanics I, MBB 403-3 Physical Biochemistry, MBB 413-2 Physical Biochemistry Laboratory, MBB 421-3 Nucleic Acids, MBB 422-3 Biomembranes, MBB 423-3 Protein Structure and Function, MBB 441-3 Bioinformatics, MBB 442-3 Proteomics, PHYS 492-3 Special Topics in Physics, PHYS 413-3 Advanced Mechanics, PHYS 455-3 Modern Optics, and one of PHYS 332-4 Electronics and Instrumentation, PHYS 332W-4 Optics Laboratory, PHYS 347-3 Introduction to Biological Physics, and one of CHEM 360-3 Thermodynamics and Chemical Kinetics, CHEM 362-3 Statistical Physics, PHYS 344-3 Thermal Physics, and one of CHEM 460-3 Advanced Physical Chemistry, PHYS 445-3 Statistical Physics, and one of PHYS 464-3 Quantum Chemistry, PHYS 485-3 Quantum Mechanics.

Other Requirements
Please see "Requirements for Major" on page 209.

Physics Major Program
This program offers a solid physics background with the opportunity to branch out into other disciplines. Because of maximum flexibility in upper division physics requirements, students can plan their own upper division major programs to fit individual objectives and interests. Students must consult a physics advisor when planning their course of study and must have their program approved by the department.

Lower Division Requirements
(46 credit hours)
CHEM 121-4 General Chemistry and Laboratory I, CHEM 122-2 General Chemistry II, CMPT 102-3 Introduction to Scientific Computer Programming, MATH 151-3 Calculus I (or MATH 150), MATH 152-3 Calculus II, MATH 251-3 Calculus III, MATH 252-3 Vector Calculus, PHYS 126-3 Electricity, Magnetism and Light (or PHYS 121 or 141), PHYS 131-2 Physics Laboratory I*, PHYS 211-3 Intermediate Mechanics, PHYS 231-3 Physics Laboratory II, and PHYS 253-3 Physics Laboratory III.

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PHYS 255-3 Vibrations and Waves
PHYS 285-3 Introduction to Relativity and Quantum Mechanics

and one of
MATH 232-3 Applied Linear Algebra
MATH 240-3 Algebra I: Linear Algebra

*students with credit for PHYS 140 and 141 are not required to take PHYS 131

Upper Division Requirements
(31 credit hours)
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 321-3 Intermediate Electricity and Magnetism
PHYS 332W-4 Optics Laboratory
PHYS 344-3 Thermal Physics
PHYS 385-3 Quantum Mechanics I

In addition, a minimum of 15 other upper division physics credit hours must be taken to satisfy the physics subject area requirements for a major.

Other Requirements
Please see “Requirements for Major” on page 209.

Applied Physics Honors Program
This program offers a solid physics background combined with an extensive introduction to the applied aspects that is necessary for careers in high technology industries. In addition, students have the option of various specialized upper division courses. Students should enrol in co-op education to acquire industrial experience.

PHYS 432 should be based on an industrially motivated project. An additional second year CMPT course, such as CMPT 212, is recommended.

Students considering physics graduate programs should take PHYS 413, 415 and 445.

Lower Division Requirements
Requirements are the same as for the applied physics major program.

Upper Division Requirements
(52 credit hours)
Students must complete all of
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 321-3 Intermediate Electricity and Magnetism
PHYS 326-4 Electronics and Instrumentation
PHYS 332W-4 Optics Laboratory
PHYS 344-3 Thermal Physics
PHYS 384-3 Methods of Theoretical Physics I
PHYS 385-3 Quantum Mechanics I
PHYS 421-3 Electromagnetic Waves
PHYS 431-4 Advanced Physics Laboratory I
PHYS 432-5 Undergraduate Honors Thesis
PHYS 445-3 Statistical Physics

Biological Physics Honors Program
(15-17 additional upper division credit hours)
Honors program graduates may undertake graduate work in either physics or molecular biology, or related areas, and should choose their courses accordingly.

Additional Upper Division Requirements
Students complete 15-17 upper division credit hours in addition to the biological physics major program (see “Biological Physics Major Program” on page 230) by choosing either Option A or Option B as stipulated below.

Option A
MBB 493-15 Individual Study Semester

Option B
PHYS 384-3 Methods of Theoretical Physics I
PHYS 415-3 Quantum Mechanics II
PHYS 432-5 Undergraduate Honors Thesis
PHYS 445-3 Statistical Physics

Chemical Physics Honors Program
This program is offered jointly by the Departments of Chemistry and Physics. Entry requires permission of both. Honors program graduates may go graduate work in either chemistry or physics and should choose their courses accordingly. Students are strongly encouraged to take at least three lower division computing science credit hours.

Lower Division Requirements
Requirements are the same as for the chemical physics major program.

Upper Division Requirements
(51 credit hours)
Students must complete all of
CHEM 340-3 Materials Chemistry
CHEM 366-2 Physical Chemistry Laboratory I
CHEM 462-3 Molecular Spectroscopy
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 321-3 Intermediate Electricity and Magnetism
PHYS 332W-4 Optics Laboratory
PHYS 413-3 Advanced Mechanics
PHYS 415-3 Quantum Mechanics II
PHYS 421-3 Electromagnetic Waves
PHYS 426-3 Solid State Physics
PHYS 432-5 Undergraduate Honors Thesis
PHYS 445-3 Statistical Physics

Mathematical Physics Honors Program
This program is offered jointly by the Departments of Mathematics and Physics. Entry requires permission of both. Graduates may undertake graduate work in mathematics or physics depending on interest. Some additional work in either mathematics or physics may be required. Students should speak with an advisor as soon as possible to schedule their programs.

Lower Division Requirements
(46 credit hours)
Students must complete one of
CMPT 126-3 Introduction to Computer Programming
or CMPT 120 and 125
CMPT 102-3 Introduction to Scientific Computer Programming
and all of
MATH 151-3 Calculus I (or MATH 150)
MATH 152-3 Calculus II
MATH 242-3 Introduction to Analysis I
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
PHYS 126-3 Electricity and Magnetism (or PHYS 120 or 140)
PHYS 125-3 Mechanics and Special Relativity (or PHYS 120 or 140)
PHYS 126-3 Electricity, Magnetism and Light (or PHYS 121 or 141)
PHYS 131-2 Physics Laboratory I
PHYS 211-3 Intermediate Mechanics
PHYS 231-3 Physics Laboratory II
PHYS 233-2 Physics Laboratory III
PHYS 255-3 Vibrations and Waves
PHYS 285-3 Introduction to Relativity and Quantum Mechanics

Other Requirements
Please see “Requirements for Honors and Honors First Class” on page 209.

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### Physics Honors Program

This program provides an in-depth understanding of basic physics in preparation for post-graduate study in physics and closely related disciplines. A grade average of B or higher is required to graduate.

#### Lower Division Requirements
Requirements are the same as for the physics major.

#### Upper Division Requirements
(50 credit hours)

- MATH 310-3 Introduction to Ordinary Differential Equations
- PHYS 321-3 Intermediate Electricity and Magnetism
- PHYS 332W-4 Optics Laboratory
- PHYS 344-3 Thermal Physics
- PHYS 384-3 Methods of Theoretical Physics I
- PHYS 385-3 Quantum Mechanics I
- PHYS 413-3 Advanced Mechanics
- PHYS 415-3 Quantum Mechanics II
- PHYS 421-3 Electromagnetic Waves
- PHYS 431-4 Advanced Physics Laboratory I
- PHYS 432-5 Undergraduate Honors Thesis
- PHYS 445-3 Statistical Physics

At least nine credit hours are to be chosen from PHYS 390-3 Introduction to Astrophysics

- PHYS 455-3 Modern Optics
- PHYS 465-3 Solid State Physics
- PHYS 485-3 Particle Physics
- PHYS 490-3 General Relativity and Gravitation

At least three credit hours are to be chosen from PHYS 326-4 Electronics and Instrumentation

- PHYS 380-3 Introduction to Subatomic Physics
- PHYS 399-3 Computational Physics
- PHYS 430-4 Digital Electronics and Interfacing
- PHYS 484-3 Nonlinear Physics

#### Other Requirements
Please see “Requirements for Honors and Honors First Class” on page 209.

### Nuclear Science Minor Program

This minor program is offered jointly with the Department of Chemistry. See page 214 for details.

### Physics Minor Program

Students must complete a minimum of 14 upper division physics credit hours in courses numbered 300 and above, together with all the prerequisites. Students will select a reasonable list of courses that must be approved by the Physics department.

### Co-operative Education Program

Dr. K. Kavanagh, physics co-op co-ordinator, 7078 Technology and Science Centre 2, 778.782.4244, kavanaghh@sfu.ca

Ms. N. Yano, Faculty of Science co-op co-ordinator, P8441 Shrum Science Centre, 778.782.4654, nnyano@sfu.ca

Co-op combines work experience with academic studies. The student spends alternate terms on campus and in study related jobs. Please see “Co-operative Education” on page 237.

### Science Year One Program

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7486 Tel, 778.782.7488 Fax, www.surrey.sfu.ca/science

**Advisor**

Mrs. N. Williams BA (S Fraser), (14th floor) Central City, 778.782.7486

This cohort program, offered at the Surrey campus, provides a solid foundation for those interested in a science major program offered by any faculty. The program provides a viable avenue to complete the prerequisites for various professional programs such as medicine, optometry, pharmacy, veterinary medicine, naturopathic medicine, chiropractic, and dental hygiene. The admission requirements are the same as those of the Faculty of Science. However, students who were admitted to other Simon Fraser University faculties may also enroll, should space allow, but may be required to complete additional courses to augment a deficiency.

This is a full-time two term program beginning in fall. The program is organized by Faculty of Science disciplines. A list of courses, offered by the program, is published in the fall for future fall and spring terms. For planning, see www.surrey.sfu.ca/science.

Students are free to complete other Simon Fraser University courses (offered at any campus or by distance education) provided that those courses do not conflict with the Science Year One Program. Students must complete both full time Science Year One Program terms before they are eligible to transfer to any other Simon Fraser University program.

The program advisor may approve a modification of the program requirements when appropriate. For example, a student who enters with advance credit for MATH 151 may substitute an elective course offered at Simon Fraser University Surrey. Consult the program advisor for advice.

Students without a declared major are encouraged to discuss their academic goals with the program advisor for advice. Students should discuss the selection of a minor. Students should discuss this selection with an advisor early in their year.

The department offers a program within the Faculty of Science leading to a bachelor of science with a major or honors in Statistics and a major or honors in Actuarial Science. Students may wish to consider a minor in another discipline. Students interested in statistics or in actuarial science may consider the following related programs: mathematics and computing science, management and systems science.

### Admission Requirements

#### Accreditation of Courses

The Statistical Society of Canada has accredited certain courses within the department for partial fulfillment of the educational requirements for the associate statistician (AStat) designation. The list of accredited courses is available at www.scc.ca/accreditation/courses_e.html. Please contact the
department for details. Further information on the professional statistician (PStat) and associate statistician (AStat) designations is available at www.ssc.ca.

Actuarial Science
For admission, students must have completed each lower division required course in mathematics and statistics, or its equivalent, with a minimum C+ grade. They must also have completed ACMA 210 with a minimum grade of C+ and have a CGPA of at least 3.0. Students will be selected competitively. Achieving the minimum grade requirements will not guarantee program admission. The program will only admit 25-30 students each year. Students should apply in the term in which they take ACMA 210.

Management and Systems Science
For major or honors program admission, a program-related Simon Fraser University grade point average (GPA) of 2.7 is required. This GPA is based on the lower division courses required for the Management and Systems Science program taken at Simon Fraser University. Admission is competitive and achieving the minimum GPA does not guarantee admission to the program. Please see “Management and Systems Science Program” on page 220.

Statistics
For major or honors program admission, a student must normally have achieved a B- average in at least two approved Simon Fraser University STAT courses. See the department website for the details of implementation of this policy. Statistics minor program admission requires at least a C+ average in STAT 270. See the department website at www.stat.sfu.ca/programmes/statistics/admission for the details of policy implementation.

Other Requirements
Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfill writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative, and Breadth Requirements” on page 7 for information.

Courses for Further Credit
No student may take, for further credit, any course offered by the Department of Statistics and Actuarial Science which is a prerequisite for a course the student has already completed with a grade of C- or higher without permission of the department.

Computing Recommendation
Some experience with a high level programming language is recommended by the beginning of the second year.

Non-specialist STAT Courses
The following courses are intended to be particularly accessible to students who are not specializing in statistics: STAT 100, 101, 203, 201, 302, 403.

Open Workshops
Some introductory and service courses are organized through the department’s open workshops. In addition to regularly scheduled lectures, students enrolled in STAT 100, 101, 203, 270, 201, 302 are encouraged to come to the workshops for assistance any time during posted hours. At the workshop students meet with the co-ordinator, teaching assistants and students, and work together to understand mathematics in a friendly and helpful environment. The statistics workshop is held in K9516 Shrum Science Centre (inside K9510).

Beginning Level Requirements in Statistics
Students considering enrolling in a statistics course who do not have BC high school mathematics 11 (or equivalent) must see the basic math workshop co-ordinator. These students may take the non-credit basic math course, basic algebra, offered through the Department of Mathematics.

Students who are unsure of their level of preparation are strongly encouraged to take the free math assessment test at the basic math workshop, K9505 or at Simon Fraser University Vancouver. Be sure to discuss the test results with the lab instructor in the basic math workshop, or her designate.

Prerequisite Grade Requirement
Students must have obtained a grade of C- or better in prerequisite courses labelled STAT, and C or better for courses labelled ACMA, offered by the Department of Statistics and Actuarial Science.

GPA Requirement for Continuation
To continue in the actuarial science or statistics programs, students must maintain a GPA of at least 2.25 on courses labelled MATH, STAT or ACMA. To continue in management and systems science, students must maintain a CGPA of at least 2.5.

Faculty of Science Requirements
Students must satisfy the Faculty of Science upper division credit, breadth and grade point average requirements.

Credit for Statistics Courses
Credit for STAT courses can depend on the order that the courses are taken. There are three kinds of courses offered.

- Introductory courses STAT 100
- Service courses STAT 101, 201, 203, 301, 302, 403.

Upon taking any service or mainstream course, credit may not be subsequently obtained for STAT 100. Upon taking any mainstream course, credit may not be obtained for any service course. An exception to this rule is that both STAT 302 and STAT 403 may be taken for credit after having taken STAT 270.

Actuarial Science Major Program
Actuarial science majors must achieve a cumulative grade point average (CGPA) of 2.50 or better to graduate. Students must obtain credit for the following courses.

Lower Division Requirements
Students must complete all of ACMA 210-3 Mathematics of Compound Interest ECON 103-3 Principles of Microeconomics ECON 105-3 Principles of Macroeconomics MATH 151-3 Calculus I MATH 152-3 Calculus II MATH 251-3 Calculus III MATH 232-3 Elementary Linear Algebra STAT 270-3 Introduction to Probability and Statistics STAT 285-3 Intermediate Probability and Statistics plus two of BUS 207-3 Managerial Economics BUS 251-3 Financial Accounting BUS 254-3 Managerial Accounting ECON 210-3 Money and Banking

ECON 290-3 Canadian Microeconomics ECON 291-3 Canadian Macroeconomics plus two CMPT courses [recommended: (CMPT 120 and 125) or (CMPT 126 and any other CMPT course)] plus two ENGL or PHIL courses

Upper Division Requirements
Students must complete ACMA 320-5 Actuarial Mathematics I STAT 330-3 Introduction to Mathematical Statistics
List 1
plus four of the following list 1 courses
ACMA 315-3 Credibility Theory ACMA 335-3 Risk Theory ACMA 425-3 Actuarial Mathematics II ACMA 445-3 Loss Models: Estimation and Selection

List 2
plus four of the following list 2 courses (at least one must be ACMA 465, 470 or 475) ACMA 385-3 Special Topics in Actuarial Science ACMA 465-3 Mathematics of Demography ACMA 470-3 Property and Casualty Insurance ACMA 475-3 Theory of Pension ACMA 490-3 Selected Topics in Actuarial Science ACMA 495-3 Directed Studies in Actuarial Science BUS 312-4 Introduction to Finance BUS 315-4 Investments BUS 316-3 Derivative Securities BUS 360-3 Business Communication BUS 410-3 Financial Institutions BUS 413-4 Corporate Finance BUS 419-3 Advanced Derivative Securities ECON 301-4 Intermediate Microeconomic Theory ECON 305-5 Intermediate Macroeconomic Theory MACT 316-3 Numerical Analysis I MATH 308-3 Linear Programming MATH 310-3 Introduction to Ordinary Differential Equations

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Computing Science
Students must complete one of
CMPT 125-3 Introduction to Computing Science and Programming II
CMPT 126-3 Introduction to Computer Science and Programming

b) Upper Division Requirements
Students must complete all of
STAT 300-3 Introduction to Mathematical Statistics
STAT 302-3 Linear Models in Applied Statistics
STAT 402-3 Generalized Linear and Nonlinear Modelling
STAT 410-3 Statistical Analysis of Sample Surveys
STAT 490-3 Statistical Design and Analysis of Experiments
STAT 450-3 Statistical Theory
plus four additional upper division courses labelled ACMA, MACM, MATH or STAT, excluding STAT 301, 302 and 403.*
*Students should consult a departmental advisor before selecting these courses. It is recommended that the four additional upper division courses be selected from STAT 300, 380, 400, 460, 490, 495 and MACM 316. Note that for honors students these four courses may not overlap with those used to satisfy requirements d) and e) below.

c) Minor Program Requirement
Students are required to complete a minor in a discipline other than statistics. The certificate in actuarial mathematics may fulfill this requirement.

Actuarial Science Honors Program
See the University and Faculty of Science regulations for required total credit hours and cumulative grade point average (CGPA), and upper division credit hours and upper division grade point average (GPA) for graduation in this program.
Honors students must complete
• the lower and upper division requirements for the Actuarial Science major program (see “Actuarial Science Major Program” on page 233)
• the upper division requirements in list 1 for the Actuarial Science major (see “List 1” on page 233)
• seven list 2 courses in the upper division requirements for the Actuarial Science major program (see “List 2” on page 233). At least two of these seven courses must be from ACMA 465, 470, 475 or 490.

Statistics Honors Program
A bachelor of science with honors in statistics requires 132 credit hours. Please see “Requirements for Major” on page 209 for further breadth, upper division credit, and other requirements.
In addition to the requirements a), b) and c) for a major, candidates for an honors degree in statistics will be required to complete the following.

d) Additional Mathematics Requirements
Students complete all of
MATH 242-3 Introduction to Analysis
MATH 320-3 Advanced Calculus of One Variable
MATH 322-3 Complex Variables
plus one of
MATH 332-3 Introduction to Applied Algebraic Systems
MATH 339-3 Groups and Symmetry
MATH 438-3 Linear Algebra

e) Additional Statistics Requirements
STAT 380-3 Introduction to Stochastic Processes
STAT 460-3 Decision Analysis and Bayesian Inference

Statistics Minor Program
Statistics minor candidates are subject to the general regulations of the faculty in which they are enrolled. In addition, students will be required to obtain credit for the following courses.

Mathematics Requirements
Students must complete one of
MATH 151-3 Calculus I
MATH 154-3 Calculus I for the Biological Sciences
MATH 157-3 Calculus for the Social Sciences I
plus one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for the Biological Sciences
MATH 158-3 Calculus for the Social Sciences II
plus both of
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III

Statistics Requirements
Students must complete
STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics
and at least five of the following courses.
ACMA 315-3 Credibility Theory and Loss Distributions
ACMA 320-3 Actuarial Mathematics I
ACMA 335-3 Risk Theory
ACMA 445-3 Survival Models
ACMA 490-3 Selected Topics in Actuarial Science
ACMA 495-3 Directed Studies in Actuarial Science
ACMA 516-3 Numerical Analysis I
MATH 308-3 Linear Programming
STAT 330-3 Introduction to Mathematical Statistics
STAT 350-3 Linear Models in Applied Statistics

Certificate in Actuarial Mathematics
This program provides the mathematical and statistical background for the Society of Actuaries and the Casualty Actuarial Society. Students enrolling in this program must already have completed MATH 151, 152 or their equivalents and have knowledge of one programming language. To obtain the certificate, four lower division courses and eight upper division courses must be completed. The lower division courses follow.
ACMA 210-3 Mathematics of Compound Interest
MATH 232-3 Elementary Linear Algebra
STAT 270-3 Introduction to Probability and Statistics
STAT 285-3 Intermediate Probability and Statistics

A GPA of at least 2.50 is required on the eight required upper division courses. These eight courses must be chosen from the list below and must include
ACMA 320-5 Actuarial Mathematics I
at least four of
ACMA 315-3 Credibility Theory and Loss Distributions
ACMA 335-3 Risk Theory
ACMA 395-3 Special Topics in Actuarial Science
ACMA 425-3 Actuarial Mathematics II
ACMA 445-3 Survival Models
ACMA 490-3 Selected Topics in Actuarial Science
ACMA 495-3 Directed Studies in Actuarial Science

Management and Systems Science Program
Please see page 220 for information.

Co-operative Education
This program integrates work experience with academic study. See “Co-operative Education” on page 237 and consult early with the co-op co-ordinator, Mr. E. Simons, at esimons@sfu.ca.
Continuing Studies

1300 Lohn Building, West Mall Complex, Burnaby, BC V5A 1S6, 778.782.5100 Tel, 778.782.3851 Fax, www.sfu.ca/cstudies

Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC V6B 5K3, 778.782.5100 Tel, 778.782.5098 Fax, www.sfu.ca/cstudies

Simon Fraser University Surrey, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, www.sfu.ca/cstudies/surrey

Centre for Online and Distance Education, 1300 Lohn Building, West Mall Complex, 778.782.3524 Tel, 1.800.663.1411 (toll free within BC), 778.782.4964 Fax, www.sfu.ca/cde

Dean
J. LaBrie BS (Maine), MSA (St Michael’s, VT), EdD (Penn)

Associate Deans
J. Collinge BA, MA, PhD (S Fraser)
T. Nesbit BA (Open), MA (San Francisco State), PhD (Br Col)

Program Directors
A. Aberbach BA (Rutgers), MA (Miami), PhD (Florida)
J. Ashworth BA (S Fraser), MED (Tor), EdD (Br Col), Program Director, Dialogue Programs
D. Bell BEd (Alta), MED (Br Col), Program Director, Community Education Program
S. Burgess BBA (S Fraser), MBA (Br Col), Program Director, Management and Professional Programs
J. Collinge BA, MA, PhD (S Fraser), Associate Dean and Director, Centre for Online and Distance Education
C. Dunlop BA (Middlebury), MSc, PhD (Br Col), Program Director, Research and Evaluation
M. Fedeles MSc (Kosice), PhD (Br Col), Program Director, Health Sciences Programs
J. Hsu BA (Fu Jen), MA (Kans), Program Director, Interpretation and Translation Program
D. Jamieson-Noel BA (W Ont), MA, PhD (S Fraser) Program Director, Centre for Online and Distance Education
K. Jayasundara BSc (Sri Jayawardanapura), MSc (Nat’l Inst Educ, Sri Lanka), PhD (S Fraser), Program Director, Centre for Online and Distance Education
C. Joye BEd, MA (McGill), PhD (SAID, Philippines), Program Director, Office of International Development
W. Liu BA (Nankai), BA (Tenn), Program Director, Asian Professional Programs

Noni Maté BA (Br Col), Program Director, 7th Floor Media

P. Southby, Program Director, Conference Services
W.D. Steinberg, BA (Beijing Normal), MA (Hawaii), PhD (Calif) Program Director, International Teaching Assistants Program
Y. Tabin BGS, MA, PhD (S Fraser), Program Director, Continuing Studies
J. Whately BA (Chapman Coll), MA, PhD (S Fraser), Program Director, Centre for Online and Distance Education
C. Wood, BA, MA (S Fraser) Program Director, English Language and Culture Program
Y. Wosk BA (Br Col), MA (Yeshiva, NY), PhD (W Lyon), PhD (Boston), Program Director, Interdisciplinary Programs
J. Zibier BA (S Fraser), Llib (Br Col), Program Director, 7th Floor Media

Part Time Credit Study

Students seeking degree credit on a part-time basis by either day or evening study are governed by the same regulations, have the same privileges, and follow the same admission and enrollment procedures as full-time students. Relevant sections of this Calendar should be consulted concerning policies and procedures for admission, enrollment, academic programs available, program requirements, and current fees. Specific details regarding individual credit programs are available from faculties and departments.

Students pursuing certificates, diplomas, or minors in the evenings, at Simon Fraser University Surrey, or at Simon Fraser University Vancouver should consult with academic advisors at the Academic Resource Office (Burnaby campus), or Information and Registration Services (Simon Fraser University Vancouver) or Registrar and Information Services (Simon Fraser University Surrey), or with the Continuing Studies office. The form must be signed by the instructor during the second week of classes. Special audit fees (payable at the Academic Resource Office or Information and Registration Services) are calculated at one half the normal course fee. Persons aged 60 or more who are Canadian citizens or have permanent resident status in Canada are exempt from this fee. Designated seniors credit courses are not eligible for special audit. Special audit students may not change enrollment status after the term begins.

Seniors Program

This program is an integral part of the University’s commitment to “help adults achieve their intellectual, professional and cultural goals through programs for lifelong learning that build on the strengths of the University and the resources of the community.” Now in its 34th year, it offers up to 30 challenging non-credit courses at both the Vancouver and Surrey campuses. It is open to anyone 55 years of age and older regardless of educational background. Courses meet once a week during mornings or early afternoon for two hours, and run for seven to 10 weeks. New courses begin in September, January and May. In addition, we now offer a Seniors Program Non-credit Certificate in the Liberal Arts. Senior citizens are also invited to apply for University admission to complete courses leading to a degree. Once admitted, courses may be completed one at a time or through a full course load at either the Vancouver campus where three special morning credit courses for seniors are offered each term, or at the Burnaby or Surrey campuses. A Senior Citizens Certificate is available for those who complete 30 credit hours. All credit courses count toward a university degree and all credit courses are tuition free for seniors 60 years of age or older.

For full details, please visit our website at www.sfu.ca/seniors, or call 778.782.5212.

Special Audit Student

The category of special audit student enables community members to access University credit courses as auditors. Those interested in completing regular courses but who do not meet the general admission requirements, or who do not desire University admission may apply as special audit students. Such students attend courses but do not write final examinations or receive degree credit, records of attendance, or statements of standing.

Special audit application forms can be obtained from the Academic Resource Office at the Burnaby campus, Information and Registration Services at Simon Fraser University Vancouver, Registrar and Information Services at Simon Fraser University Surrey, or from the Continuing Studies office. The form must be signed by the instructor during the second week of classes. Special audit fees (payable at the Academic Resource Office or Information and Registration Services) are calculated at one half the normal course fee. Persons aged 60 or more who are Canadian citizens or have permanent resident status in Canada are exempt from this fee. Designated seniors credit courses are not eligible for special audit. Special audit students may not change enrollment status after the term begins.

Aboriginal Leadership and Administration

Offered through a partnership with the Kamloops Indian Band, this interdisciplinary part-time degree completion program leads to a Bachelor of General Studies degree. The blend of courses provides mid-career adults with a variety of disciplines related to leadership. First Nations Studies, public administration, and business studies.

Further information may be obtained at www.sfu.ca/integratedstudies or by calling 778.782.5128/5144.

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Services

Conference Services
Based on over 15 years of experience, Conference Services offers specialized conference organization, planning and management. Professional staff have a proven record in planning and administering academic and other events held on the Burnaby and Vancouver campuses, the Morris J. Wosk Centre for Dialogue, and at major hotels and convention centres in the Lower Mainland and Whistler. Please visit www.sfu.ca/cstudies/conf or contact 778.782.3420.

Office of International Development
Through its development projects and programs, this office builds sustainable global partnerships. It offers support in project identification, preparation, management, implementation, and consultancy services and tailor-makes contract training programs and study tours for international audiences at home or abroad. Visit www.sfu.ca/cstudies/international or contact 778.782.3987 for more information.

Research and Evaluation Unit
The unit provides a range of research and evaluation services to University program areas and to community organizations and businesses. Customized courses and workshops in organizational research and evaluation techniques are also available. Visit www.sfu.ca/cstudies/eval.htm or contact 778.782.5071.

7th Floor Media
Established in 1987, 7th Floor Media partners with local, national and international organizations to create compelling educational and cultural content applications for interactive media. The unit's focus is research using models for effective and engaging technology-enhanced learning in both traditional and non-traditional educational settings. Visit www.7thfloormedia.com or contact 778.782.5271.

Centre for Online and Distance Education
The centre, working in partnership with academic units, offers courses leading to minors, majors, certificates, diplomas and in the case of the Bachelor of General Studies, the full degree. Students may complete programs through distance/online study. The centre offers courses and programs in Arabic, archaeology, biological sciences, Canadian studies, communication, sustainable community development, computing science, contemporary arts, criminology, education, First Nations studies, geography, German, gerontology, Greek, history, humanities, Japanese, kinesiology, linguistics, philosophy, political science, psychology, sociology and anthropology, statistics, and women's studies.

Students registering in courses offered through the centre are governed by the same regulations and follow the same admission and enrollment procedures as students taking other university credit courses. Students can enroll in day, evening or distance/online courses, or a combination thereof. For more information, visit www.sfu.ca/cde, e-mail cde@sfu.ca or telephone 778.782.3524; 1.800.663.1411 (toll free in Canada).

Certificates, Diplomas and Non-credit Courses
In addition to degree credit study, Continuing Studies offers certificates, diplomas and non-credit courses in a broad variety of disciplines. Developed in association with faculty and professional organizations, and adding to the richness of Continuing Studies’ range of individual courses, workshops and seminars, these programs extend university expertise to the community and bring community knowledge and priorities to the university.

Certificate Programs

Business Writing, Public Relations and Marketing Communication
Designed with the business writer in mind, this program teaches the skills to prepare business documents, from marketing materials to position papers, and from speeches to advertising copy.

Editing
Designed to assist participants to sharpen their eye, clarify their thoughts and learn to write, edit and proofread copy efficiently, this program provides participants with the skills, knowledge and confidence needed to effectively bridge the distance between writers, publishers and readers.

English Language and Canadian Culture
This program, for participants with first languages other than English, emphasizes English speaking, listening, reading and writing skills while gaining a working knowledge of the Canadian cultural context. Participants focus on developing effective English communication skills whether they are international students seeking entrance to a Canadian university, or working professionals pursuing their career path.

Management
This program has been designed for individuals who want to develop their professional skills and master management concepts and techniques. It is an intensive, part-time program. Courses can be taken individually, as well as applied toward the certificate. Students enrolled in the Certificate Program in Management may consider concurrently earning designations with various professional associations, including the Canadian Institute of Management, the Insurance Institute of Canada, the Risk and Insurance Management Society, and the Purchasing Management Association, among others.

Publishing
Participants work through the fundamentals that are important to all aspects of publishing: writing, editing, proofreading, design, production, and process.

Technical Communications
Technical communications are an essential component of the high tech sector in the creation of documents used to train and support software and hardware users. All business sectors and government, technical communicators produce training materials, policy and procedure manuals, and other organizational documents.

Urban Design
This interdisciplinary program features two- and three-day intensive courses taught by leading urban design practitioners. The program includes theory and practice through lectures, site visits, case studies, group projects, and assignments which enhance mid-career urban design skills. Drawing on the expertise of architects, landscape architects, planners, engineers, economists, sociologists, real estate professionals, lawyers, and the collective knowledge and experiences of the public, this program encourages interdisciplinary discussion on current western Canadian urban design issues.

The Writer’s Studio: Certificate in Creative Writing
Through a blend of courses, readings and working with mentors one-on-one and in groups, this program emphasizes learning in community with other local writers and provides opportunities to develop and finish a significant portion of a manuscript. Participants work on the editorial, design, and production of Emergence, an anthology of student work.

Diploma Programs

Diploma in Advanced Interpretation
This program is a multidisciplinary and interdisciplinary program in which student interpreters develop an understanding of cross cultural communication, international politics and economies, institutional structures and dynamics, social and cultural studies, and linguistic skills. Students have the opportunity to perform interpretation at a variety of public and private sector institutions.

Advanced Project Management and Development
This comprehensive program for mid-level professionals broadens project management and development training. It provides an overview of the project management life cycle, giving participants exposure to concepts and skills such as developing the project concept, building the business case, creating successful teams, assessing technology options, supporting the project environment and setting up a project management office.

Diploma in Dialogue and Negotiation
An interactive, experiential program led by experienced faculty, this non-credit program is for mid-career professionals from diverse sectors charged with leading change through negotiating agreements, developing policies and programs and managing conflict. Participants will learn to design and implement agreement seeking processes.

Management Skills in Advanced Technology
This program covers the essential skills and knowledge required of managers in technically oriented businesses, and includes study of the principles of human and organizational behavior, resource allocation, demand forecasting, economic and financial analysis, project management, sales and marketing, eBusiness strategies, operations, business planning, writing and public speaking.

Rehabilitation Management
This program is aimed at individuals working in the healthcare community who wish to expand or complement their educational background and/or practical expertise. It uses theoretical and practical hands-on activities to deliver a broad-based series of modules in the field of rehabilitation management.

Non-credit Courses
Continuing Studies offers a broad variety of unique non-credit courses, and certificate and diploma programs frequently generate new, complementary short courses, workshops and seminars. All non-credit short courses, workshops, seminars, colloquia, conferences, round-tables and dialogues are developed with the approval and sponsorship of an academic department or academic advisory committee. Most programs have external partners from the public and private sectors, all levels of government and community groups.

The following are the non-credit programs in Continuing Studies.

City Program
Community Education Programs
Dialogue Programs
Community Outreach and Engagement Programs
English Language and Culture Program
Health Sciences Programs
Interdisciplinary Programs
Interpretation and Translation Program
International Teaching Assistants Seminars
Language Programs
Management and Professional Programs
Science Programs
Seniors Program
Writing and Publishing Program

For more details about Continuing Studies non-credit courses, visit www.sfu.ca/cstudies.
Co-operative Education

1150 Maggie Benston Student Services Centre, 778.782.3255 Tel, 778.782.5496 Fax, www.sfu.ca/coop, co-op@sfu.ca
Director of Work Integrated Learning M. Klemetski BBA (Regina)
Faculty of Arts and Social Sciences Co-operative Education, 6046 Academic Quadrangle, 778.782.5839 Tel, 778.782.5875 Fax, www.sfu.ca/coop/arts, email coop-arts@sfu.ca
Faculty of Business Administration Co-operative Education, 2313 Lohn Building, West Mall Complex, 778.782.3619 Tel, 778.782.5922 Fax, www.sfu.ca/coop/bus-coop, email coop-bus@sfu.ca
School of Communication Co-operative Education, K9665 Shrum Science Centre, 778.782.5367 Tel, 778.782.4024 Fax, www.sfu.ca/coop/comms-coop, email coop-cnms@sfu.ca
School of Computing Science Co-operative Education, 9830 Applied Science Building, 778.782.4313 Tel, 778.782.5829 Fax, www.sfu.ca/coop/cscicoop, email coop-cmpt@sfu.ca
Faculty of Education Co-operative Education, 6046 Academic Quadrangle, 778.782.5839 Tel, 778.782.5875 Fax, www.sfu.ca/coop/coop/arts
School of Engineering Science Co-operative Education, 9896 Applied Science Building, 778.782.5885 Tel, 778.782.4951 Fax, www.ensc.sfu.ca/coop, email coop-eng@sfu.ca
Faculty of Health Sciences Co-operative Education, 1205 East Academic Annex, 778.782.7632 Tel, 778.782.5927 Fax, www.sfu.ca/coop/science, email hsci-coop@sfu.ca
School of Kinesiology Co-operative Education, K9620 Shrum Science Centre, 778.782.5712 Tel, 778.782.3040 Fax, www.sfu.ca/coop/kines, email coop-kines@sfu.ca
Science and Environment Co-operative Education, P9447 Shrum Science Centre, 778.782.4716 Tel, 778.782.3031 Fax, www.sfu.ca/coop/science, email coop-science@sfu.ca
School of Interactive Arts and Technology Co-operative Education, 2560 Advising Centre, Simon Fraser University Surrey, 778.782.7617 Tel, 778.782.7403 Fax, www.sfu.ca/coop/siat, email coop-siat@sfu.ca

Explore Co-operative Education

In the Co-operative Education Program (co-op) students alternate between study semesters and paid work semesters to gain relevant, real-world experience before graduation and the advantage to help them succeed after university.

A sample outline of a co-op student's academic and work schedule is provided below. See “Sample Work/Study Sequence” on page 238.

Admission Requirements

All Canadian citizens, permanent residents, and visa students are eligible to participate in the co-op program. Visa students are eligible for work permits which are only valid for co-op employment arranged through the co-op program.

Co-op is an optional program, except in the School of Engineering Science where it is mandatory within the program's structure (see “School of Engineering Science” on page 117).

Acceptance into the co-op employment process is based on academic performance and interview evaluations where motivation, interpersonal, and communication skills are evaluated. Students must normally have 45-60 credit hours and a CGPA of at least 2.5 before participating in the co-op employment process; however, all students are admitted on an individual basis and the requirements may be flexible.

Application Procedure

All students (except those in engineering science) must apply for a co-op co-ordinator and attend a co-op employment session. Students are encouraged to attend an information session that is offered at the beginning of every term. Visit www.sfu.ca/coop/bol/ to discover session dates.

After attending an information session, students complete the general co-op application form which is available at www.sfu.ca/coop/application.

All students complete the co-op curriculum course Bridging Online (BOL), except those in engineering science. Visit www.sfu.ca/coop/bol for details. Students are encouraged to contact appropriate co-op co-ordinators early in their university career as possible, but no later than two semesters prior to the first work term.

Transfer Students

Transfer students should contact the co-op office as soon as possible and must complete at least one study term before engaging in a work term. Students transferring from an approved accredited co-op program elsewhere, and who have successfully completed work terms, will receive transfer credit for those work terms. However, 50% of the student’s degree program, including work terms, must be completed here at Simon Fraser University.

The Employment Process

Once accepted into the co-op program and the required Bridging Online curriculum is complete, the student can then participate in the employment competition. Job opportunities are identified and posted through co-op. Students select those for which they wish to compete and an interview may ensue. If an employment offer is made, the student may accept or decline based on contractual obligations and ethics associated with progression in the employment process. These obligations are made clear to all participants at each point in the employment process.

Once the student accepts an employment offer, they must enroll in the appropriate co-operative education course.

Application form submission and/or participation in the employment competition indicates a commitment to the program and acceptance of the following:

- permission for release to prospective employers of copies of transcript
- agreement to inform Simon Fraser University of the acceptance of any co-op employment position
- agreement to complete the co-op education program

- all accepted students are responsible for following the policies and procedures outlined in the Co-op Student Handbook that is posted on the web at www.sfu.ca/coop/student_handbook.html.

Operation of the Program

The co-op program staff facilitate all pre-employment student preparation, negotiate work terms, meet employers to establish employer needs, and meet with students to monitor progress. They oversee job competition and visit students on the job, counsel and advise students, and deal with special problems.

Self-Directed Work Search

Students may also find or create their own work terms, locally or abroad. Guidance is provided.

Self-initiated jobs must be approved by the co-op program in advance of the work term, and students are required to enroll in and pay for the appropriate co-op practicum.

International Opportunities

Students may travel internationally to complete a work term. Contact the international co-op co-ordinators at icoop@sfu.ca for more information.

Sample Schedule(s)

The next page shows two sample work term and study patterns (see “Sample Work/Study Sequence” on page 238). An alternating sequence, beginning before year three, provides the best learning structure. Other combinations can be arranged to meet student and employer needs. Students may not normally complete their final term at Simon Fraser University on a co-op work term.

Additive Credits

The co-op courses are deemed to have additive credit. These units do not count toward the total units required for the degree.

Co-op Fees

An application to co-op fee and a registration fee are charged for each four month work practicum in which the student enrolls. These fees are tax deductible. For information, see “General Regulations” on page 36.

Degree Designation

Four work terms must be successfully completed for a degree with a co-op designation. Successful work term completion includes a passing grade (comprised of both a work project evaluation and a work performance evaluation) and compliance with minimum standards of participation. (A work term typically consists of full time employment for 13-16 weeks.)

Certificate Option

Students (except those in engineering science) who successfully complete three work terms are eligible for a certificate of completion. The same performance criteria as noted above are required for the certificate option. Students who receive a certificate do not receive recognition on their diploma, nor are they eligible for further work terms in their current program.
## Sample Work/Study Sequence

<table>
<thead>
<tr>
<th>Year</th>
<th>Term I</th>
<th>Term II</th>
<th>Term III</th>
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<tbody>
<tr>
<td></td>
<td>Term I</td>
<td>Term II</td>
<td>Term III</td>
</tr>
<tr>
<td></td>
<td>September to</td>
<td>January to</td>
<td>May to August</td>
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<tr>
<td></td>
<td>December</td>
<td>April</td>
<td></td>
</tr>
<tr>
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<td>study term #2</td>
<td>study term #3</td>
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<td>30 cumulative</td>
<td>45 cumulative</td>
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The Undergraduate Semester in Dialogue provides a unique opportunity to affirm the role of a university to educate students into productive, creative, well-balanced, thoughtful, and reflective members of society.

The full time, one semester, 15 credit Undergraduate Semester in Dialogue will provide intensive mentoring, strong emphasis on communication skills, an ability to think critically and evaluate effectively, a perspective that encourages discipline bridging, and an opportunity to learn from, and network with, stimulating and accomplished individuals from off-campus.

Each semester’s program will consist of a core course (DIAL 390) that will be similar for each offering, and individual topics varying with each offering that are focussed on a subject that encourages broad interdisciplinary approaches (DIAL 391 and 392).

Admission to the program will be by application. Students should consult with their department prior to their Dialogue semester to determine the application of DIAL credit hours to fulfil major, minor or elective course requirements. All three courses must be taken simultaneously. Prospective students should apply eight months prior to the Dialogue program in which they wish to participate. Admission decisions will be made no later than four months prior to program start.

A course outline for each offering of DIAL 390, 391 and 392 will be available prior to the application deadline.

Admission Requirements

Students must have completed 45 credit hours prior to beginning the Dialogue program. Individual courses may have other prerequisites. Application forms, information about course content, and other information are available from the program office. These courses also are eligible to fulfill electives in post baccalaureate diploma programs.
Academic Honesty

All members of the University community share the responsibility for the academic standards and reputation of the University. Academic honesty is a cornerstone of the development and acquisition of knowledge. Academic honesty is a condition of continued membership in the university community.

Academic dishonesty, like other forms of dishonesty, is misrepresentation with intent to deceive or without regard to the source or the accuracy of statements or findings. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; it is, furthermore, unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University.

The following examples are representative but not exhaustive of activities constituting academic dishonesty: plagiarism (presenting the work of another person as your own); submitting the same work more than once without prior approval; cheating; misrepresentation of facts; submitting the same findings. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; it is, furthermore, unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University.

The University code of academic honesty is contained in policy T10.01 available in the Library or any departmental office, or in the Undergraduate Schedule of Classes and Examinations published every term, or on the Web via http://students.sfu.ca.

Penalties for Acts of Student Misconduct

Penalties imposed by the University for misconduct may include one or more of the following: a verbal or written reprimand, exclusion from specified areas of the University; restitution or other ameliorative measures; suspension or expulsion from the University.

1.1 Degrees Offered

Listed under each faculty.

1.2 Administration of Graduate Studies

Dean of Graduate Studies

The dean is responsible for the general supervision of graduate work at the University and chairs the senate graduate studies committee.

Director, Graduate Records and Admissions

The director is responsible for enrolment of students, assessment of fees, maintenance of records, and other administrative duties.

Committees

The committees responsible for the supervision of graduate students are the supervisory committee, graduate program committee, the faculty graduate studies committee and the senate graduate studies committee. The functions of these committees in relation to individual students are as follows.

Supervisory Committee (see 1.6.4)

The student's supervisory committee helps the student define and develop a program of studies and reports on the student's progress to the graduate program committee. The supervisory committee forms part of the student's final examination committee.

Graduate Program Committee

The graduate program committee is responsible for recommending admission, reviewing the student's progress and arranging for the supervision and examination of the student. For most graduate programs, the graduate program committee is the departmental graduate studies committee. In the Faculties of Business Administration and Education, the graduate committee is the faculty graduate studies committee.

Faculty Graduate Studies Committee

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Graduate Studies Information

A wide range of additional information on graduate studies at Simon Fraser University may be found on the University's website at www.sfu.ca/dean-gradstudies. In addition, most departments offer publications describing their graduate programs. These are available directly from the departments and are usually posted on the department's web site.

1.3 Admission

1.3.1 General

A student may seek admission to a graduate diploma, master's or doctoral program. A student who is not qualified to enter a specific program may seek admission to the University as a qualifying student under the provisions of paragraph 1.3.6.

For admission to post baccalaureate programs, refer to the undergraduate section of this Calendar.

Before applying for admission, the student should obtain information about admission requirements and procedures. This information can be obtained from the websites of departments and faculties, or by contacting the appropriate program's graduate secretary.

Applicants meeting the minimum University requirements for admission given below are not assured admission into any graduate program. Most graduate programs have admission requirements in addition to the minimum. Furthermore, programs must restrict admission to students whose interests are compatible with available resources and faculty expertise.

1.3.2 Admission to a Graduate Diploma Program

The minimum University requirements for admission to a graduate diploma program are as follows:

a) a bachelor's degree from a recognized university, or the equivalent;

b) submitted evidence, usually references from qualified referees, of the student's ability to undertake advanced work in the area of interest.

In exceptional circumstances, a student may be admitted with lower formal qualification than in (a) when there is significant professional experience relevant to the proposed area of study.

Students must satisfy any further requirements set by the graduate program committee. Students whose native language is not English may be required to satisfy the University and the graduate program committee as to their capability in English. (See also 1.3.12.)

1.3.3 Admission to a Master's Program

The minimum University requirements for admission to a master's program are as follows:

Simon Fraser University 2007 - 2008 Calendar

Graduate General Regulations

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Penalties for Acts of Academic Dishonesty

Penalties imposed by the University for academic dishonesty may include one or more of the following: a warning, a verbal or written reprimand, reassessment of work, failure on a particular assignment, failure in a course, denial of admission or readmission, forfeiture of awards or financial assistance, suspension or expulsion from the University.

Student Conduct

Simon Fraser University is committed to creating a scholarly community characterized by civility, diversity, free inquiry, mutual respect and individual safety. The code of student conduct is intended to define students' basic responsibilities as members of the academic community, to define inappropriate student conduct and to provide procedures and penalties to be invoked and applied if they engage in such unacceptable behaviour. Each student is responsible for his/her conduct which affects the University community. The code shall not be construed to unreasonably prohibit peaceful assemblies, demonstrations or free speech.

The following activities are representative but not exhaustive of behaviours constituting misconduct: disruptive or dangerous behaviour; behaviour which results in damage, destruction and theft of University property or the property of any member of the University; forgery or alteration of University documents or records; misuse of University resources including information (computing) resources; unauthorized entry or presence in University premises; misuse of student disciplinary procedures.

The University code of student conduct is contained in policy T10.01 available in the Library or any departmental office, or in the Undergraduate Schedule of Classes and Examinations published every term, or on the Web via http://students.sfu.ca.

Penalties for Acts of Student Misconduct

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The graduate program committee is responsible for recommending admission, reviewing the student's progress and arranging for the supervision and examination of the student. For most graduate programs, the graduate program committee is the departmental graduate studies committee. In the Faculties of Business Administration and Education, the graduate committee is the faculty graduate studies committee.

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1.3 Admission

1.3.1 General

A student may seek admission to a graduate diploma, master's or doctoral program. A student who is not qualified to enter a specific program may seek admission to the University as a qualifying student under the provisions of paragraph 1.3.6.

For admission to post baccalaureate programs, refer to the undergraduate section of this Calendar.

Before applying for admission, the student should obtain information about admission requirements and procedures. This information can be obtained from the websites of departments and faculties, or by contacting the appropriate program's graduate secretary.

Applicants meeting the minimum University requirements for admission given below are not assured admission into any graduate program. Most graduate programs have admission requirements in addition to the minimum. Furthermore, programs must restrict admission to students whose interests are compatible with available resources and faculty expertise.

1.3.2 Admission to a Graduate Diploma Program

The minimum University requirements for admission to a graduate diploma program are as follows:

a) a bachelor's degree from a recognized university, or the equivalent;

b) submitted evidence, usually references from qualified referees, of the student's ability to undertake advanced work in the area of interest.

In exceptional circumstances, a student may be admitted with lower formal qualification than in (a) when there is significant professional experience relevant to the proposed area of study.

Students must satisfy any further requirements set by the graduate program committee. Students whose native language is not English may be required to satisfy the University and the graduate program committee as to their capability in English. (See also 1.3.12.)

1.3.3 Admission to a Master's Program

The minimum University requirements for admission to a master's program are as follows:
a) a bachelor's degree with a cumulative grade point average of at least 3.0 from a recognized university, or the equivalent;
b) submitted evidence, usually references from qualified referees, of the student's ability to undertake advanced work in the area of interest.

In exceptional circumstances, a student may be admitted with lower formal qualification than in (a) when there is significant professional experience relevant to the proposed area of scholarship.

Students must satisfy any further requirements set by the graduate program committee. Students whose native language is not English may be required to satisfy the University and the graduate program committee as to their capability in English. (See also 1.3.12).

1.3.5 Admission Under Special Arrangements

Exceptionally able applicants who wish to work for a master's or doctoral degree outside or between existing programs at Simon Fraser University may apply to work under special arrangements. A student applying for special arrangements must have a well developed plan of studies in an area that can be shown to have internal coherence and academic merit, and in which the university has appropriate expertise and interest among its faculty members.

Graduate students applying or working under special arrangements are required to conform to Senate regulations for graduate students. However, there are additional regulations which concern only those applying or working under special arrangements. Enquiries about these regulations should be directed to the Dean of Graduate Studies by December 1st of each year for admission to the fall term.

Students working under special arrangements may be required to take a selection of courses from existing programs.

1.3.5.a Cohort Special Arrangements

Cohort-based special arrangements programs are designed to meet the educational needs of specific student groups in fulfilling the requirements for a master's degree where these needs cannot be met within existing programs. Each program will integrate studies from across two or more departments, schools or faculties and will involve a curriculum and requirements recommended by each program's graduate program committee and approved by the senate graduate studies committee. Students may undertake this degree program only through specific admission to the cohort program. Admission criteria, degree requirements and any other special conditions for a particular cohort special arrangements program must be approved in advance by the senate graduate studies committee; these may not be below the minimum admission and degree requirements of regular graduate programs. In some instances, tuition fees may differ from the regular graduate fee schedule published in the Calendar, and will be announced separately.

1.3.6 Admission as a Qualifying Student

Normally, qualifying students will be working either to improve cumulative grade point averages in order to meet the minimum University requirement, or to make up deficiencies in their backgrounds to satisfy the graduate program committee in their area of interest. An applicant may be recommended for admission as a qualifying student when it is expected that the admission requirements for a master's or a doctoral program can be met through the satisfactory completion of no more than 30 credit hours of specified courses. A qualifying student who has completed the make-up work may then apply under 1.3.3 or 1.3.4 for admission to a master's or doctoral program.

The minimum University requirements for admission as a qualifying student are as follows:

a) a bachelor's degree, or the equivalent.
b) submitted evidence of academic ability, usually in the form of references from qualified referees.

Admission as a qualifying student does not guarantee future admission to a master's or doctoral program unless the offer of admission states that satisfying specific requirements within a specific period of time will result in automatic admission to the program.

Normally a student will be admitted with qualifying status for a maximum of one year (three consecutive terms).

1.3.7 Admission as a Non-degree Student

Normally, a non-degree student at the graduate level has at least a bachelor's degree, or the equivalent, is admitted in order to take specified courses, but is not seeking a degree from this University. A non-degree student will not be permitted to enrol in undergraduate courses.

Application is through the graduate program committee in the department in which the student wishes to work; applicants are advised to contact the department before submitting an application (see 1.3.1). Transcripts of previous university work (or proof of obtaining a grade) will be required at the time of application, but letters of reference will not necessarily be required.

No credit will be given towards any degree offered by the University for courses taken as a non-degree student except, under unusual circumstances, on petition to the senate graduate studies committee.

1.3.8 Conditional Admission

Conditional admission may be offered to an applicant who is substantially considered as a candidate for admission but who has not completed all admission requirements at the time of application. An offer of conditional admission will specify the remaining requirements to be met and a limited time period within which the requirements must be met. Normally, the requirements must be fulfilled either prior to enrolling in the program, or within the first term of enrollment.

1.3.9 Admission as an Exchange Student

Bona fide graduate students at other universities who wish to take courses at Simon Fraser University, not leading to a degree at this University, will be admitted to take specific graduate courses on the recommendation of the chair of the department (or equivalent officer) and the dean of graduate studies at the other university, and with the permission of the appropriate graduate program committee and the dean of graduate studies at Simon Fraser University.

1.3.9a Admission as a Visiting Researcher

Simon Fraser University accepts visiting research students under the terms of the Canadian Graduate Student Research Mobility Agreement. For details, see the Graduate Studies website at www.sfu.ca/gradstudents/prospective/visiting.html

1.3.10 Application for Admission

Application is through the Dean of Graduate Studies website. Completed applications and accompanying materials must be submitted to the department before the deadline specified by the department. Applicants are advised to check with the appropriate department as to the prevailing application procedures and deadlines for the graduate program in which they are interested. Applicants are advised that deadlines for applications for awards and teaching assistantships may be earlier than the deadlines for application to a graduate program.

All decisions on graduate admissions are made by the senate graduate studies committee, on recommendation from graduate program committees. Decisions on admissions shall be final. Final approval of admission for non-degree students or exchange graduate students is by the dean of graduate studies.

1.3.11 Application to Take a Second Master's or Doctoral Degree

Students who have a master's or a doctoral degree (either from Simon Fraser University or another university) can apply to take a second master's or doctoral degree under the following constraints.

a) no course work taken for the first degree shall count towards the second;
b) none of the research done for the first degree shall be used for the second;
c) none of the time spent in residence for the first degree shall count towards the residence for the second degree.

1.3.12 English Language Competence

English is the language of instruction and communication in the University. Accordingly, an applicant whose primary language is not English or whose previous education has been conducted in another language must demonstrate command of English sufficient to pursue graduate studies in the chosen field. Applicants normally will be required to achieve a satisfactory score on a standardized test acceptable to the University. This test must include a writing component. The Test of English as a Foreign Language (TOEFL) including reading, writing, speaking, and listening components, is acceptable for this purpose. The IELTS (International English Language Testing Systems) is also acceptable. The minimum university requirements for test scores is TOEFL 88 with a minimum of 20 in each category (internet based exam), or TOEFL 570 and TWE 5 (paper based), or TOEFL 230 (computer based), and IELTS overall band score of 7.0; some graduate programs have higher requirements, as
described elsewhere in this Calendar. Some graduate programs have higher requirements, as described elsewhere in this Calendar.

Further details about the above tests may be obtained from the following.

TOEFL and TWE – Education Testing Service, CN 6151, Princeton, NJ, 08541-6151 USA

Other acceptable English tests – Director, Graduate Records and Admissions

1.3.13 Certificate Programs
A certificate program consists of approved combinations of graduate courses taken from at least two different departments. Graduate certificate programs are intended to be both thematic and interdisciplinary.

Courses taken for credit in a graduate degree program may be applied to certificate programs. A certificate program must include a minimum of four courses and a minimum of 12 credit hours.

Certificate programs may be taken only by students already enrolled in a master’s or doctoral program at Simon Fraser University.

Certificates are awarded at the time of convocation.

1.4 Enrollment
Students are enrolled in one of two different types of programs. In 'per term fee' programs, students are charged a standard fee for each term of enrollment. In 'per credit fee' programs, students are charged a fee based on the number of credit hours taken. (See “Graduate Fees” on page 251 for current tuition fee rates.) All students are in per term fee programs except for students in per credit fee programs as listed under Graduate Fees (page 251).

1.4.1 Date of Entry
University regulations permit graduate students to enter programs at the beginning of any term, unless a program requires students to start in a specific term.

1.4.2 Enrollment
Registration begins two months before the start of each term and must be completed by the Friday preceding the start of classes; see “Academic Calendar of Events” on page 12. New students are allowed an additional two weeks to finalize their enrollment, without financial penalty. The course or research-related work for which the student enrolls must have the approval of the chair of the graduate program committee and of his/her senior supervisor, once the senior supervisor is appointed. In addition, enrollment for courses taken outside the student’s department must have the approval of the course instructor. Students going on leave are required to enroll (see “1.8.4 Application to go on Leave” on page 247).

1.4.3 Continuity of Registration
Students in per term fee programs are required to enroll in every term until all requirements for the degree have been fulfilled. This includes students enrolled on leave. A student who does not enroll is considered to have withdrawn from the University. (See 1.8.4 for regulations on student leave.)

Students in per credit fee programs enroll only in those terms in which they are taking courses or working on other requirements, such as a project or field exam. A student in a per credit fee program who does not enroll at least one of three consecutive terms is considered to have withdrawn from the University.

1.4.6 Course Audit
Graduate students may audit graduate courses, with permission of the instructor, senior supervisor and graduate program chair of the student’s department. Such audits are recorded as AU on the student’s transcript.

Prior to enrollment, the student and instructor must agree on the requirements for auditing the class. These requirements must include regular attendance at class meetings, completion of readings and participation in class activities.

Audited courses will not count toward degree requirements.

1.4.7 Co-operative Education
Co-operative education integrates work experience and graduate studies. The name reflects the co-operative relationship among the University, employer and student. Practical experience from work terms is related to the student’s major interests within the graduate program. A number of graduate programs have been approved, by the relevant graduate program committee, for co-operative education (co-op). These are listed below.

- chemistry (MSc)
- economics (MA)
- environmental toxicology (MET)
- mathematics (MSc)
- resource and environmental management (MRM)
- actuarial science (MSc)

The list of approved programs is subject to change. In addition, some faculties may permit co-op work terms for individual students on a case-by-case basis.

Interested students should consult the co-op co-ordinator.

The application to enrol in co-op is subject to departmental approval. Each department has a specific course for the co-op work term or practicum.

1.5 Academic Standing

1.5.1 Normal Grading System
The following grades are used at the graduate level in the University.

- A+ = 4.33 point (in use since 2002-3)
- A = 4.00 points
- A- = 3.67 points
- B+ = 3.33 points
- B = 3.00 points
- B- = 2.67 points
- C+ = 2.33 points (in use since 2002-3)
- C = 2.00 points
- F = 0 points
- IP = 0 points
- CO = 0 points
- N = 0 points

A student in a master’s or doctoral program must maintain a cumulative grade point average (CGPA) of 3.0 in courses taken at Simon Fraser University. The CGPA is the cumulative average of the grade points earned in the Simon Fraser University graduate courses taken towards a graduate diploma, or towards a master’s or doctoral degree.

A student in a diploma program must maintain a cumulative grade point average (CGPA) of 2.5 in courses taken at Simon Fraser University. Courses graded on a satisfactory/unsatisfactory basis are not included in the grade point average.

When a student is working on a thesis, extended essay or project as part of the requirements for the degree, the notation IP (in progress) shall be entered on the transcript. IP is not a grade and is not used in calculating the student’s CGPA.

When a thesis, extended essay or project is completed, the notation CO shall be entered on the transcript. CO is not a grade and is not used in calculating the student’s CGPA.

In exceptional circumstances, the grade for a course may be deferred for a specified period determined by the course instructor. This shall be entered as DE in the student’s record. If the grade is not received by the director, graduate records and admissions by the last day of the first month of the next term, the DE grade will automatically be converted to an F. When the grade for a course is not deferred and no grade is received by the director, the notation W will be placed in the student’s record. For the purposes of calculating the CGPA, W counts for 0 points.

A course that is dropped before the end of the second week of the term will not be recorded on the student’s transcript. A course that is dropped within the third to eighth weeks (inclusive) will be recorded on the transcript with the notation WD. No course may be dropped after the end of the eighth week and before the end of the twelfth week, except in extenuating circumstances approved by the director, graduate records and admissions. Courses dropped under extenuating circumstances will receive a W notation. See “Academic Calendar of Events” on page 12 for dates that apply each term. WD and WE grades carry no credit value and are not used in GPA calculations.

1.5.2 GN Notation
The notation GN (grade not reported) may be used if circumstances beyond the control of the University make it impossible for grades to be assigned for a course. The notation has no numerical equivalent and does not affect either the term grade point average or cumulative grade point average.

1.5.3 Satisfactory/Unsatisfactory Grading (S/U)
With the approval of senate graduate studies committee, a department may require that a designated course be graded satisfactory/unsatisfactory (S/U) for all students in the course.

An individual student may request to take a course on an S/U basis by applying to the supervisory committee. If that committee concurs, the request will be submitted to the graduate program committee for final approval. If the course is outside the student’s department, the approval of the other graduate program committee must also be obtained.

Having enrolled in a course on any grading basis, a student may not change to another grading basis for that course.

None of the student’s minimum course work requirement under 1.7.2 may be taken SU. Neither an S nor a U will count in the CGPA, but the grade received shall be recorded on the transcript.

1.5.4 CGPA Required For Continuation and Graduation
A student in a master’s or doctoral program is required to maintain a CGPA of at least 3.0. A student in a graduate diploma program is required to maintain a CGPA of at least 2.5. Failure to meet the minimum CGPA is evidence of unsatisfactory progress and the matter will be considered by the graduate program committee as required under the Procedure for the Review of Unsatisfactory Progress in regulation 1.8.2.

Under no circumstances will a student, whose CGPA is below 3.0, be awarded a graduate degree.

Under no circumstances will a student with a CGPA below 2.5 be awarded a graduate diploma.

1.5.5 Graduate Students Retaking a Course
A graduate student may retake a course under the following conditions.

Simon Fraser University 2007 • 2008 Calendar
a) when the same numbered course covers different material in different terms (many special topics and directed readings courses are of this nature).

b) when the student wishes to improve the grade earned in the course. Permission of the graduate program committee is required.

Under a), both grades are recorded on the student’s transcript, and the grade and the credit hours for both iterations of the course are used for the calculation of the CGPA and towards the credit hours required for the degree. Under b), both grades are recorded on the student’s transcript with the notation that the course was retaken to improve the grade. However, only the better grade is used in calculating the CGPA and the credit hours for the course are used only once towards the requirements for the degree.

A student must indicate at the time of enrollment under which of the two conditions the course is being retaken. The correctness of this indication must be certified by the chair of the graduate program committee.

1.6 Supervision

1.6.1 General

When a graduate student has been admitted, the graduate program committee will exercise general supervision and counselling for the student through the chair of the graduate program committee or a faculty member designated by the chair, until a senior supervisor has been appointed.

1.6.2 Supervision of a Qualifying Student

A qualifying student comes under the general supervision of the graduate program committee, exercised through the chair of that committee or a faculty member designated by the chair.

1.6.3 Senior Supervisor

In consultation with the student, the graduate program committee will appoint a senior supervisor as soon as possible after admission to the graduate program. Normally, this appointment shall be made no later than the beginning of the second term of full time equivalent enrollment after the student’s admission, although with the permission of the senate graduate studies committee, departments may define a later date. The senior supervisor is the person principally responsible for supervising the student throughout the degree program. A senior supervisor must hold the rank of assistant professor or above at Simon Fraser University.

A senior supervisor who is planning to be off campus for more than three months shall arrange for proper supervision of the student during this absence. The graduate program committee and the dean of graduate studies shall be informed in writing of the arrangement.

A senior supervisor is not required for students in a graduate diploma program. The director of a diploma program is responsible for roles normally assigned to the senior supervisor (e.g. advising students, signing forms).

1.6.4 Supervisory Committee

A supervisory committee is not required for students in graduate diploma programs.

In degree programs in which there is a requirement for a thesis, a project or extended essays, a supervisory committee, constituted as described below, must be established. For students in master’s degree programs that culminate in a field or comprehensive examination, the senior supervisor alone may comprise the supervisory committee.

Where a supervisory committee requires members in addition to the senior supervisor, the senior supervisor, in consultation with the student, shall recommend the composition of the supervisory committee. The supervisory committee consists of the senior supervisor and at least one other person. Normally, this recommendation shall be made during the same term in which the senior supervisor is appointed.

For degrees designated by senate as professional degrees, the other member(s) of the committee may be other suitably qualified person(s). For other graduate degrees, at least one member of the committee (in addition to the senior supervisor) must be a faculty member or an adjunct professor or a research associate at Simon Fraser University. Other member(s) of the supervisory committee may be other suitably qualified person(s). A recommendation for a supervisory committee that includes a person who is not a faculty member at Simon Fraser University should be accompanied by a curriculum vitae of that person.

The composition of the supervisory committee, for which the senior supervisor is chair, shall be approved by the graduate program committee and sent to the dean of graduate studies for final approval. It shall be sent to the faculty graduate studies committee for information.

The supervisory committee is responsible for helping the student develop a program of study leading to a degree and for reporting to the graduate program committee at least once a year on the student’s progress towards completing the degree requirements. The supervisory committee shall be available to the student for consultation on a regular basis.

1.6.5 Co-supervision

A co-supervisor may be designated when a member of the supervisory committee exercises a degree of supervision and support similar to that of a senior supervisor. Normally, a co-supervisor will be appointed if:

1. a)he or she is an Simon Fraser University faculty member holding the rank of assistant professor or above (see 1.6.3); or holds an appointment as an adjunct professor (see policy A12.08) at Simon Fraser University in the same department as the student and senior supervisor; or holds an appointment as an associate member (see policy A12.07) at Simon Fraser University in the same department as the student and senior supervisor; and

b)the department graduate program committee

satisfies the faculty graduate studies committee and the dean of graduate studies that the level of supervision and/or support to be provided by the co-supervisor is greater than normally expected from regular members of a supervisory committee.

Reasons for approving co-supervision will vary, but could include: co-investigator with the senior supervisor of a research grant funding the student’s research; providing significant supervision in a field outside the senior supervisor’s area of expertise; supervising a laboratory where the student undertakes research.

Appointment as co-supervisor recognizes significant contribution of time, expertise or financial resources. However, the supervision of the student remains the responsibility of the senior supervisor, who must perform all of the activities normally expected of a senior supervisor. The co-supervisor will not take on any of the administrative responsibilities of the senior supervisor. The co-supervisor may not substitute for the senior supervisor, except under circumstances described in 1.6.3.

Co-supervisory status is recommended by the department graduate program committee to the faculty graduate studies committee. Departments and faculties are responsible for setting criteria and standards appropriate to their disciplines. If the faculty graduate studies committee supports the appointment, it shall be forwarded to the dean of graduate studies for approval. Status as co-supervisor will be noted on all relevant documents, and on the signature page of the thesis.

Co-supervisory status may be terminated by the dean of graduate studies if either condition a) or b) (above) is no longer met, or if the co-supervisor is unable to comply with Simon Fraser University policies and procedures relevant to graduate supervision. It is the responsibility of the co-supervisor to inform his/her department chair (at Simon Fraser University) or employer (off campus) of his/her status as co-supervisor.

1.6.6 Change in the Supervisory Committee

Continuity of supervision is important in all graduate work. As a consequence, a change in supervisory committee, especially a change in senior supervisor, may be made only on the basis of strong reasons.

A request for a change in the supervisory committee may come from the student or any member of the supervisory committee. It shall be sent to the graduate program committee accompanied by the reasons, in writing, for the proposed change. If the graduate program committee concurs in the request, it shall be sent to the dean of graduate studies for final approval.

1.6.7 Human Subjects Ethics Review

All research plans involving human subjects must receive ethics approval. Copies of the policy (R20.01), procedures and forms for this review may be obtained from the Office of Research Services or from the University web site (www.sfu.ca/policies/research/index.htm).

1.7 Residence and Course Requirements

Minimum course work requirements are defined in 1.7.1, 1.7.2 and 1.7.4. See 1.7.6 for regulations concerning courses taken at other institutions. There is a residence requirement for all doctoral programs (see 1.7.3).

1.7.1 Requirements for the Graduate Diploma

There is no residence requirement for the graduate diploma. Candidates must complete the University minimum requirement of 22 credit hours of graduate course work. A graduate program committee may require graduate or undergraduate work in addition to the minimum requirements, either on an individual basis or, with senate ratification, for all students in the program.

1.7.2 Residence Requirement for the Master’s Degree

Master’s candidates must complete the University minimum requirement in one of the following ways.

1. successfully complete a minimum of 12 credit hours of graduate course work and submit a thesis;

2. successfully complete a minimum of 20 credit hours of graduate course work and submit at least two extended essays, or a project;

3. successfully complete a minimum of 30 credit hours of graduate course work and pass a final examination.
1.7.3 Residence Requirement for the Doctoral Degree
The aim of the residence requirement is that the student spend a period of time in contact with faculty members and other students. Doctoral students must enroll for a minimum of five terms. On leave terms will not count toward this minimum.

1.7.4 Course Requirements for the Doctoral Degree
There are no University course requirements for the doctoral degree. However, a student's supervisory committee, graduate program committee or the faculty graduate studies committee, may require a student to take specified courses or credit hours as part of the degree program.

1.7.5 Doctoral Thesis
All doctoral programs require a doctoral thesis based on substantial original research.

1.7.6 Courses in Master's and Doctoral Programs

The following rules apply to the minimum course work requirement.

One half of the minimum course work of the University or departmental degree requirements must be taken at this University.

None of the University minimum may be courses taken in order to qualify for admission.

None of the University minimum may be undergraduate courses.

A graduate student may apply to take one or more courses at another university for credit towards a degree at Simon Fraser University under the following conditions.

a) Such applications shall be made at least one month before the course/courses start and shall be approved by the student's supervisory committee and graduate program committee and be sent to the Dean of Graduate Studies for final approval.

b) While taking a course/courses at another university for credit towards a degree at Simon Fraser University, the student shall maintain full-time status.

Any decision of the graduate program committee regarding the approval of courses taken at another university shall be made on a case-by-case basis within the guidelines of the University curriculum.

1.8 Progress, Withdrawal and Leave

1.8.1 Progress Evaluation
For master's and doctoral students, the supervisory committee shall report on the student's progress at least once each year. This report will be sent, in writing, to the graduate program committee with a copy to the student. The evaluation of student progress in course work will rely in part on their maintenance of a CGPA of 3.0, as required by graduate regulation 1.5.4.

For graduate diploma students, a progress review will be initiated if the CGPA drops below 2.5.

1.8.2 Review of Unsatisfactory Progress
If a student's progress appears to be unsatisfactory, the supervisory committee or the chair of the program committee may require a student to withdraw or require the student to improve in specific ways, subject to the guidelines of the University.

The student concerned has the right to appear before the graduate program committee when the case is considered, and may submit any materials relevant to the case. A student who is required to withdraw shall be informed, in writing, with copies to the dean of graduate studies and the director, graduate records and admissions.

If required to improve within a specific period of time, the student shall be informed in writing as to what precisely is required, with copies to the dean of graduate studies and the director, graduate records and admissions.

Any decision of the graduate program committee under the provisions of this section may be appealed to the senate graduate studies committee through the dean of graduate studies. The student has the right to appear before the senate graduate studies committee when the case is heard.

The decision of that committee shall be final.

1.8.3 Withdrawal from Courses and from the University

Permission of the senior supervisor in the chair of the graduate program committee is required to withdraw from a course.

If the senior supervisor is not yet appointed, or if the student is in a graduate diploma program, permission of thechair of the graduate program committee is required. If such permission is granted, a student may withdraw from a course without academic penalty up to the end of the ninth week of classes in any term.

Under extenuating circumstances, a student may withdraw from a course without academic penalty during the tenth to the twelfth week of classes. Such circumstances must be beyond the control of the student (e.g., medical or financial crisis); under such circumstances, therefore, 898 (Master's Thesis Research), 899 (PhD Research) or a similar course may be added, as appropriate. Permission of the senior supervisor and the chair of the graduate program committee is required.

A student may withdraw from the University at any time by notifying the chair of the graduate program committee and the director, graduate records and admissions.

A student who has withdrawn from the University and who wishes to re-enter shall apply for permission under the same conditions as any other applicant.

1.8.4 Application to go on Leave
This regulation applies only to students in term fee programs.

Students in term degree programs are expected to maintain continuous enrollment (see 1.4.3). However, a student may apply to go on leave if both of the following conditions are satisfied.

a) a situation arises which makes it necessary to interrupt the graduate program;

b) no substantial use will be made of University facilities.

Permission to enroll on leave must be approved by the student's supervisory committee and the graduate program committee. Students on leave are required to enroll during the normal enrollment period for each term by indicating on leave status when enrolling.

Students who wish to enroll on leave for more than three sequential terms must submit a written explanation for all subsequent on-leave enrollments. Such applications require approval from the Dean of Graduate Studies.

The on-leave fee may be waived in exceptional circumstances, such as those resulting from accident, illness or parenting responsibilities.

1.9 Preparation for Examinations

1.9.1 Examining Committee for a Master's Degree Candidate
Each candidate for a master's degree shall be examined on the thesis, extended essays or project. With the exception of designated 'professional' master's programs (see 1.10.6), each examining committee shall have the following minimum composition:

a) the chair of the student's graduate program committee, or his/her designate, who shall be a non-voting chair of the examining committee. If the chair of the graduate program committee is also on the student's supervisory committee, his/her shall designate a member of faculty at this University, who is not a member of the student's supervisory committee, as chair.

b) all members of the student's supervisory committee.

c) a member of faculty at the university, or a person otherwise suitably qualified, who is not a member of the student's supervisory committee. For those seeking a degree under special arrangements, this person shall be from outside the University. For a thesis defence in the Faculty of Arts and Social Sciences, a Master's examiner may not be a member of the same department as the one granting the degree, unless a waiver is granted by the Dean of Arts and Social Sciences or his/her designate.

1.9.2 Preparation for Examination of Master's Thesis
Preparation for the examination of a master's thesis shall not take place until the thesis is substantially complete and in the format laid down in Preparation of a Thesis, Extended Essays and Project: Regulations and Guidelines (revised February 1997).

The candidate's supervisory committee shall make a recommendation to the chair of the graduate program committee concerning the date, place and time of the thesis examination and the composition of the examining committee in conformity with 1.9.1.

Upon approval of the chair of the graduate program committee, this recommendation, with the thesis title and an abstract, shall be sent to the director, graduate records and admissions for entry into the University's records. The examining committee composition shall reach the director at least four weeks before the examination date. At this time, the chair of the graduate program committee will notify the University community of the intended time and place of the examination.
At least two weeks before the date of the thesis examination, unbound copies of the completed thesis shall be distributed to the examining committee by the chair of the graduate program committee, and one copy shall be made generally available for inspection by interested members of faculty and students. Department rules may require earlier submission of the completed thesis.

If the date or place has been changed, the chair of the graduate program committee will notify the University community. The examination of the thesis shall take place under the regulations for thesis examination given in 1.10.1.

1.9.3 Examining Committee for Doctoral Thesis
Each candidate for a doctoral degree shall be examined on the thesis. Each examining committee shall have the following minimum composition:

a) the chair of the graduate program committee, or designate, who shall be a non-voting chair of the examining committee. If the chair of the graduate program committee is also on the student’s supervisory committee, he shall designate a member of faculty at the University, who is not a member of the student's supervisory committee, as chair.

b) all members of the student's supervisory committee

c) a member of faculty at the University or a person otherwise suitably qualified, who is not a member of the student's supervisory committee. For a thesis defense in the Faculty of Arts and Social Sciences, the 'internal external' examiner may not be a member of the same department as the one granting the degree.

d) an external examiner who shall be specifically qualified in the field of the thesis and not be a member of faculty at the University

1.9.4 Preparation for Examination of Doctoral Thesis
Preparation for the examination of a doctoral thesis shall not take place until the thesis is substantially complete and in the format laid down in Preparation of Thesis, Extended Essays and Project: Regulations and Guidelines (revised February 1997).

The candidate’s supervisory committee shall make a recommendation to the chair of the graduate program committee concerning the composition of the examining committee (in conformity with 1.9.3) and the date, place and time of the thesis examination. Upon approval of the chair of the graduate program committee, this recommendation, with the thesis title, abstract, and curriculum vitae of the external examiner, shall be sent to the Dean of Graduate Studies for final approval. The examining committee composition shall reach the Dean of Graduate Studies at least six weeks before the examination date. At this time, the chair of the graduate program committee will notify the University community of the intended time and place of the examination.

After the recommendation is approved, the Dean of Graduate Studies shall formally invite the external examiner. Unbound copies of the completed thesis shall be distributed to the examining committee by the chair of the graduate program committee after approval of the examining committee and thesis examination arrangements by the dean and at least four weeks before the date of examination. The chair of the examining committee shall inform the Dean of Graduate Studies in writing when the thesis has been distributed. Department rules may require earlier submission of the completed thesis.

The examination of the thesis shall take place under the regulations for thesis examination given in 1.10.1.

1.9.5 The Role of the External Examiner
The external examiner should be a distinguished scholar with particular experience in the field of the thesis research. The examiner shall be free from potential conflict of interest which may arise, for example, from research collaboration with the student or prospective employment of the student. Whether the external examiner will participate in person or in absentia, including the possibility of a conference telephone connection or similar means, will be determined by the dean of graduate studies who will take into account the departmental views.

The external examiner shall be asked to report on the thesis, to the plan of graduate studies only, before the examination. If the report states that the thesis is ready for defense, a copy shall be sent to the chair of the examining committee by the dean of graduate studies for distribution to all members of the examining committee before the examination. The contents of the report will not be communicated to the student. If the report recommends that the examination be postponed, the dean shall send a copy to the chair of the examining committee, the senior supervisor and the chair of the graduate program committee. The chair of the graduate program committee and the senior supervisor will inform the student of the content of the report. Following discussions with the student and the supervisor, the chair of the graduate program committee shall report to the dean whether the examination will take place as scheduled or be postponed. Once the examination has taken place, and if the thesis is passed, the external examiner shall send a brief report to the senior supervisor which indicates the general quality of the thesis. That report (which may be either a copy of the initial report to the dean of graduate studies or a report prepared after the defense) shall accompany the recommendation for award of the degree.

In the event of examination in absentia, the report of the external examiner should be quite extensive and give a specific recommendation as to whether the thesis ought to pass, fail, or be subject to revision as under 1.10.2. The report may contain specific questions the external examiner would like posed to the candidate. The report shall be copied, by the dean of graduate studies, to the chair of the examining committee, for distribution to all members of the examining committee before the examination. Specific questions raised by the external examiner in that report shall be directed to the candidate during the examination by members of the examining committee selected by the chair of the examining committee.

1.9.6 Notification of Doctoral Thesis Examination
At least 10 days before the proposed examination, the chair of the graduate program committee will notify the candidate, the examining committee, the dean or deans of faculty concerned and the dean of graduate studies of the date, place and time of the thesis examination; this date shall not be earlier than the originally proposed date. The dean of graduate studies will notify the University community.

1.10 Examinations
1.10.1 Thesis Examination
The candidate shall give an oral account of the research on which the thesis is based and defend the thesis itself. The candidate must be prepared to answer questions on the field of the research and related fields.

Thesis examinations are open to the University community. Copies of the thesis abstract shall be made available to all those attending the examination. The chair of the examining committee shall allow proper opportunity for questions on the thesis to come from persons who are not members of the examining committee but are attending the examination. The dean of graduate studies or designate shall have the right to attend all phases of the examination.

After the chair of the examining committee is satisfied that all relevant questions have been answered, the examining committee shall meet in camera to classify the thesis.

1.10.2 Classification of the Thesis
There are four possible outcomes of the thesis defence:

1) the thesis may be passed as submitted
2) the thesis may be passed on the condition that revisions be completed to the satisfaction of the senior supervisor
3) the examining committee may defer making judgement if it judges that the thesis could pass after additional work by the candidate. A thesis upon which judgement is deferred shall come forward for re-examination within a period specified by the examining committee. The examining committee may require formal re-examination under section 1.10.1 or may reach its decision by examination of the revised thesis. The examining committee may not defer judgement a second time.
4) the thesis may be failed. In this case, the candidate is required to withdraw from the University.

The decision of the examining committee is by simple majority vote except that, in the cases of doctoral candidates or candidates enrolled under special arrangements, the classification of the thesis may not be at a higher level than that of the external examiner. A decision to pass the thesis or to defer making judgement may not be reached on a tie vote of the examining committee, if at first a majority vote to pass the thesis cannot be reached, and subsequently, if a majority vote to defer judgement cannot be reached, the thesis will be failed.

1.10.3 Recommendation for the Award of the Degree
When a student has successfully defended the thesis and made any minor revisions required, the supervisory committee shall recommend award of degree. This recommendation goes for approval respectively to the graduate program committee, the faculty graduate studies committee, the senate graduate studies committee and senate, which has the final authority to award the degree.

The title of the thesis, extended essays, professional paper and projects will be recorded on the student’s transcript.

1.10.4 Submission of the Thesis to the Library
If the examining committee has required minor revisions to a thesis, these will be completed as soon as possible after the examination and checked by the senior supervisor. Two unbound copies of the final draft of the completed thesis shall be sent to the library together with a memorandum from the senior supervisor certifying that all required revisions have been made. These two copies will be bound, catalogued and retained by the library, one for the general collection and one for the University archives. Graduate program committees may also require not
1.10.5 Examination of Extended Essays Submitted in Partial Fulfillment of Degree Requirements
Examination for an extended essay shall be as for the examination of a master’s thesis. The extended essay of a successful candidate shall be deposited in the library in the same format as for a thesis.

1.10.6 Examination of Projects Submitted in Partial Fulfillment of Degree Requirements
For degrees designated ‘professional degrees’ by Senate (presently executive MBA, day MBA, MED, MPP, MRM, MEng, MPub) the project will be examined in ways designated by the appropriate faculty graduate studies committee and the dean of graduate studies.

Examination of projects for all other graduate programs shall be as for the examination of theses with the following exceptions: when the project is either live, taped or filmed, only one presentation is required for examination, and only one recording is required for deposition in the library. The one copy deposited in the library shall be the property of the University. The student shall have the right to copy the original, and the right to borrow it for external showing at the discretion of the librarian.

1.11 Publication of Thesis
When the thesis is submitted to the library, the student shall authorize the copying and publication of the thesis as follows.

1.11.1 Partial Copyright License
Except as noted in 1.11.3, the student shall sign a partial copyright license which grants to the University the right to lend the thesis to users of the library, and to make partial or single copies for such users. Multiple copying is not permitted without written permission from the author except that, if the author is unobtainable, the dean of graduate studies may give this permission.

1.11.2 Reproduction
Except as noted in 1.11.3, the student shall sign an agreement form authorizing the National Library of Canada to reproduce the thesis and to sell microfilm copies on request.

1.11.3 Postponement of Publication
The results of research conducted at Simon Fraser University should be available freely to the public, and it is expected that theses will be placed in the library immediately following final revisions. It is the responsibility of graduate students to ensure that this policy is communicated clearly to relevant individuals and organizations outside the university prior to the initiation of any research project.

A thesis may be withheld from circulation and from copying for a period of 12 months from the date of defence of the thesis, in order to protect confidential commercial information, patentable material, pending application, or where immediate commercial publication is anticipated. No extensions to this time limit will be permitted. At the time of the thesis defence, a thesis withholding document requesting and authorizing such delay shall be signed by the student, the senior supervisor, and the dean of graduate studies. The official copies of the thesis and all pertinent forms shall be deposited in the library along with the withholding document. A copy of the thesis shall not be sent to The National Library of Canada during the restricted period but the abstract of the doctoral thesis shall be sent to Dissertation Abstracts International with the period of restriction duly noted.

Under exceptional circumstances, portions of a thesis may be withheld from the reference copy of the thesis that is made available to faculty members and students (see 1.9.2 and 1.9.4). This procedure must be authorized by the dean of graduate studies well before the distribution of the thesis. The dean must ensure that only the most confidential material is withheld from the thesis, and that the overall content of the thesis is not lost.

1.11.4 Publication of the Thesis by the Student
None of the clauses above preclude the student from publishing the thesis in any form at any time.

1.12 Maximum Time for Completion of the Requirements for the Degree

1.12.1 General
The maximum times for completion given below are not intended to be the normal times for completion. They are intended to take into account a wide variety of extraordinary circumstances and events that may delay completion. Individual departments may specify their expectations of normal degree completion times as a guide to determine whether a student’s progress is satisfactory.

Although it is expected that most students will complete their programs well before reaching the time limit, some students may be required to suspend work for a period of time because of mental or physical disability, pregnancy or family responsibilities. In such cases, students should apply to go on leave, should present evidence (e.g. from a doctor) of the necessity of the interruption of studies, and should request that their on-leave fees be waived. On-leave terms taken under such circumstances will be added to the maximum length of time in program. Students who take on-leave terms for other reasons will not receive extensions. Students in per credit programs do not take on-leave terms. Students in those programs should submit a letter to the chair of the graduate program committee outlining the circumstances and requesting that their maximum time in program be extended, together with the required documentation. Students with long-term disabilities should discuss their situation with the Centre for Students with Disabilities early in their graduate studies or as soon as possible after the condition is diagnosed. The centre will assist students and their departments to develop plans for completion of programs, and this may include an extension beyond the normal time limits. Such plans must be approved by the Dean of Graduate Studies.

1.12.2 Master’s Degree
Students in per term fee programs (see 1.4) shall complete all of the requirements for a master’s degree within 12 terms of equivalent enrollment. On-leave terms will not be counted as terms of enrollment. In addition, all requirements of the master’s degree must be completed within six calendar years of initial enrollment as a master’s student. Students in credit fee programs (see 1.4) shall complete all of the requirements for a master’s degree within six calendar years of initial enrollment.

1.12.3 Doctoral Degree
A student shall complete all the requirements for a doctoral degree within eight calendar years of initial enrollment as a doctoral student or, in the case of a student who has transferred from a master’s program into the doctoral program without completing the master’s degree, within eight calendar years of initial enrollment as a master’s student.

1.12.4 Readmission
A student who did not complete the degree requirements within the maximum time, and who was thus required to withdraw, may be readmitted for one term only to complete those requirements. The term of readmission may be no later than the ninth term after the one in which the student withdrew from the Program. The student applies for readmission to the relevant graduate program committee, who will make a recommendation to the dean of graduate students. Final approval for readmission is by the dean of graduate studies. Readmission decisions may be appealed in the same way as admission decisions (see 1.16.3).

1.13 Award of the Degree

1.13.1 Application for Graduation
Every candidate for a graduate degree is responsible for applying for graduation on forms available from the Office of the Dean of Graduate Studies.

1.13.2 Award of the Degree
Award of the degree is by resolution of Senate.

1.13.3 Transcripts
Certified official transcripts of the student’s graduate academic record may be obtained from the Office of the Dean of Graduate Studies. Only individually signed copies with the University seal are valid. For further information on cost refer to “Graduate Fees” on page 251.

1.14 Convocation Ceremony
Convocation is held twice annually. Graduates from the previous fall and spring terms convocate in early June, while graduates from the summer term convocate in October.

1.15 Class Interruption
Simon Fraser University makes reasonable efforts to ensure that its classes and courses of instruction proceed on a regular basis and without interruption. Faculty have certain discretion to cancel or change the timetable for their classes; they will endeavor to give reasonable notice of any cancellation or change. Simon Fraser University will not be responsible for cancellation or change of any class. Neither will Simon Fraser University be responsible for the interruption or termination of any class or course of instruction which results from fire, riot, labor disruption or any other event which occurs despite the University’s efforts, or for failure to give notice of the interruption or termination.

1.16 Graduate Student Appeals
Graduate students are advised to seek informal resolution of problems through discussions with their supervisor, graduate program chair, department chair or faculty dean, and the dean of graduate studies.
1.16.1 Grades
May be appealed to the instructor, department chair and, in some cases, faculty dean in accordance with academic policy T 20.01.

1.16.2 Progress Evaluations
May be appealed to the senate graduate studies committee (see 1.8.2).

1.16.3 Admission
Applicants who meet or exceed minimum requirements for admission are not assured of admission to any graduate program (see 1.3.1).

Normally, admission decisions may not be appealed (see 1.3.10). In exceptional circumstances, unsuccessful applicants may appeal to the committee to review university admissions. This committee will only review the fairness of admissions procedures and will not review an applicant's credentials.

1.16.4 Other Appeals
Appeals of decisions on enrollment, graduation, entry/re-entry to a program or any matter relating to academic standing (other than review of unsatisfactory progress) are referred to the senate appeals board.
## Graduate Fees

### Tuition Fee Schedule 2007 – 2008

Fees are subject to change, subject to provincial legislation, and subject to board of governors approval.

<table>
<thead>
<tr>
<th>Per Term Fee Programs</th>
<th>per term</th>
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</thead>
<tbody>
<tr>
<td>Research programs, full-time fee</td>
<td>$1,504.80</td>
</tr>
<tr>
<td>Research programs, continuing fee</td>
<td>$752.50</td>
</tr>
<tr>
<td>Research programs, on-leave fee</td>
<td>$188.20</td>
</tr>
<tr>
<td>Graduate Diploma in Bioinformatics</td>
<td>$1,475.30</td>
</tr>
<tr>
<td>Executive Master of Business Administration (EMBA), if entered in fall 2005/spring 2006</td>
<td>$7,500.00</td>
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<tr>
<td>Executive Master of Business Administration (EMBA), if entered in fall 2006/spring 2007</td>
<td>$7,650.00</td>
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<tr>
<td>Executive Master of Business Administration (EMBA), if entering in fall 2007/spring 2008</td>
<td>$7,803.00</td>
</tr>
<tr>
<td>Master of Education (MEd), off-campus, if entered in fall 2005/spring 2006</td>
<td>$2,295.00</td>
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<td>Master of Education (MEd), off-campus, if entered in fall 2006/spring 2007</td>
<td>$2,340.90</td>
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<td>Master of Education (MEd), off-campus, if entering in fall 2007/spring 2008</td>
<td>$2,387.70</td>
</tr>
<tr>
<td>Master of Education (MEd), and Master of Arts (MA) in Counselling Psychology, if entered in fall 2007 and later (non-premium)</td>
<td>$1,504.80</td>
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<tr>
<td>Master of Education (MEd), and International cohorts</td>
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<tr>
<td>ESL/EFL and Curriculum and Instruction, if entered in fall 2005/spring 2006</td>
<td>$5,750.00</td>
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<td>ESL/EFL and Curriculum and Instruction, if entered in fall 2006/spring 2007</td>
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<td>ESL/EFL and Curriculum and Instruction, if entering in fall 2007/spring 2008</td>
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<td>Master of Science (MSc) in Population and Public Health, if entered in fall 2005/spring 2006</td>
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<td>Doctor of Education (EdD), if entered in fall 2005/spring 2006</td>
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<td>Doctor of Education (EdD), if entering in fall 2007/spring 2008</td>
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<td>Co-operative Education Program practicum</td>
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<table>
<thead>
<tr>
<th>Per Unit Fee Programs</th>
<th>per Unit</th>
</tr>
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<tbody>
<tr>
<td>All graduate credit programs – basic</td>
<td>$151.10</td>
</tr>
<tr>
<td>Graduate Diploma in Quantitative Methods in Fisheries Management</td>
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</tr>
<tr>
<td>Graduate Diploma in Business Administration</td>
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<tr>
<td>Graduate Diploma in Education, if entered in fall 2005/spring 2006</td>
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<td>Graduate Diploma in Education, if entered in fall 2006/spring 2007 and later</td>
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<tr>
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<td>Master of Arts (MA) in Global Health, if entering in fall 2007/spring 2008</td>
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<td>Master of Arts (MA) in International Leadership</td>
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<td>Master of Arts (MA) in Liberal Studies</td>
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<tr>
<td>Master of Science (MSc) in Kinesiology (course work-based program)</td>
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<tr>
<td>Master of Science (MSc) in Population and Public Health, if entered in fall 2005/spring 2006</td>
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<td>Master of Science (MSc) in Population and Public Health, if entering in fall 2007/spring 2008</td>
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<tr>
<td>Specialist Master of Business Administration (MBA), if entered in fall 2006/spring 2007</td>
<td>$561.00</td>
</tr>
</tbody>
</table>

### Tuition Fees

Tuition fee calculation depends upon the program in which a student is enrolled. Most programs require students to enroll every term and charge a per-term fee. Some programs (see Tuition Fee Schedule) charge a per-credit fee, such that the fee for any term depends upon the number of credit hours in which a student enrolls.

#### Per Term Fee Programs

All graduate students pay a per term fee, except those students in programs that charge a per credit fee. The fee is paid every term, regardless of the number of courses being taken.

#### Master's Program

The minimum fee for a master’s program is six term fee units. However, the minimum fee rule will be waived for students who complete all degree requirements in less than six terms of continuous full time enrollment.

Students who enrol on leave are not eligible for the waiver of the minimum fee requirements.

A master’s students who has completed six terms of enrollment (excluding on leave enrollment) pays a continuing fee in subsequent terms equal to one half of the regular fee terms in which a student enrolls on leave do not count towards the number of terms required to switch to the continuing fee.

#### Co-operative Education

Students in a co-operative education term who are taking at least one course pay a per term fee based on the stage they have reached in their program (either regular fee or continuing fee). Students not taking a course pay the co-op fee.

Fees are listed in the tuition fee schedule.

#### Per Credit Fee Programs

In some programs, students are charged a fee based on the number of credit hours in which they enroll. All such programs are listed in the tuition fee schedule, together with the relevant tuition fee.

In programs in which there is a final ‘capstone’ requirement such as a thesis, project, extended essay or field exam, this requirement is assigned a number of credit hours. Students must enroll for this and pay the appropriate fee for at least one term, normally at the end of their program of study. Once they have enrolled for this requirement in a particular term, they must enroll in all subsequent terms until degree requirements have been completed. In the subsequent terms of enrollment for this requirement, the credit hours assigned will be half the first term’s value.

Student in co-operative education terms pay the co-op fee. If they are also taking courses, they also pay the fees applicable to those course.

Students who audit a course pay the same audit fee as domestic undergraduate students. Students in per credit programs who take undergraduate or graduate courses in other programs at Simon Fraser University, or who take courses at other institutions covered by the Western Deans’ Agreement, will pay the same fee per credit hour as they do for courses in their own programs.

Fees are listed in the tuition fee schedule.
Fees for Non-degree, Exchange and Qualifying Students
Non-degree and exchange students are admitted to take graduate courses only. Qualifying students are admitted to take undergraduate courses only. Students in the above categories who take undergraduate or graduate courses pay the following fee per credit hour: $151.10.

No tuition fees will be charged to a bona fide graduate student at another western Canadian university who attends Simon Fraser University to take a course under the terms of the Western Deans’ Agreement.

Payment
Unless otherwise noted, all fees are payable per term.

Extension and Readmission
Students in per-term fee programs
All students enrolled for a one term extension beyond the maximum time limits of their program pay the full per term fee.

All students readmitted for one term to complete their degree requirements (see “1.12.4 Readmission” on page 233) pay the full per term fee.

Students in per-credit fee programs
Students enrolled for a one term extension beyond the maximum time limits of their program, or readmitted for one term to complete their degree requirements (see “1.12 Readmission”), pay the per-credit fee applicable to their cohort.

Transfer
Students who transfer from one Simon Fraser University program to another, without completing the first, retain credit for fees paid to the first program.

Student Services and Recreation-Athletics Fees
For further information regarding these fees, see “Student Services and Recreation-Athletics Fees” on page 38.

Student Activity Fee
Students on leave do not pay this fee. For further information, see “Student Activity Fee” on page 38.

For a breakdown of the student activity fee, see “Simon Fraser Student Society” on page 471.

Special Fees
Application
$75.00
On Leave (see Graduate General Regulations)
$188.20
Reinstitution
$100.00
Graduation
$36.00

The non-refundable graduation fee is payable in six installments of $6.00 in each of the student’s first six terms of enrollment in the graduate program.

Replacement Library Card
See “Library/Identification Card Replacement” on page 38.

Penalty for Late Fee Payment
A penalty of 2% of outstanding fees after the last day of the fourth week of classes is payable, plus 2% of outstanding fees for each four week period thereafter, for a minimum charge of $10.

Universal Transit Pass (U-Pass)
For further information regarding this fee and the cost of replacing a lost card, see “Universal Transit Pass” on page 38.

Graduate Benefit Plan
A service provided by the Simon Fraser Student Society (SFSS), the Graduate Benefit Plan provides eligible graduate students with dental and extended health benefits. Graduate students are automatically enrolled provided they are

• a member of the Simon Fraser Student Society
• a graduate student (in a graduate career)
• taking at least one Simon Fraser University course, and
• residing in Canada

The Graduate Benefit Plan fees are charged to all eligible graduate students at the time of course enrolment and are included in the student account. Eligible graduate students should complete a Benefit Card Registration Form to activate coverage. Eligible graduate students are assessed fees on a per term basis, and coverage begins on September 1, January 1, or May 1. Family or couple coverage can be added to individual coverage prior to the applicable deadline.

On-leave students, who may be eligible for benefits, should contact the SFSS benefit plan office prior to the applicable deadline to determine eligibility. Eligible students who have comparable coverage may waive the benefits by completing a waiver form and submitting it to the benefit plan office, or by completing the one-time on-line opt-out before the deadline.

Deadlines for adding family or couple coverage, or opting out of the plan, occur 30 days after the benefit start date, and are as follows.

September (fall term) — September 30 at 4 pm
January (spring term) — January 30 at 4 pm
May (summer term) — May 30 at 4 pm

For more information visit www.sfsbenefits.com, or contact Simon Fraser Student Society Benefit Plan Office, MBC 2201, 8888 University Drive, Burnaby, BC, V5A 1S6, 778.782.6994 Tel, 778.782.7195 Fax, benefitplan@sfss.ca

Mandatory Supplementary Course Fees
In addition to credit course fees, mandatory supplementary course fees cover additional costs associated with photocopied materials, prepared computer disks and/or audio visual tapes that may replace or enhance the use of a required text as a means of instruction. This material may be distributed by the bookstore or individual departments.

A schedule of these fees appears below. The fees are approved by the vice-president finance and administration, following the recommendation of the advisory committee on mandatory supplementary course fees. Questions regarding these fees may be directed to the department initiating the fee, the Office of the Registrar, or the vice-president finance and administration.

Mandatory supplementary course fees are not charged for regular credit instruction services which may include

• evaluation of work or performance, such as marking of papers and exams
• laboratory use, including materials and supplies that are consumed during laboratory use. (Departments may charge a refundable deposit for materials that are used by the student and returned to the University in reasonable condition at the end of the course.)
• basic library facilities including one library card and access to collections
• basic microcomputer laboratory use
• materials or services required as a result of the method of instruction such as audio visual equipment, course outlines, study rooms and films and video tapes that are integral to the instruction and do not become property of the student.

Biological Sciences
BISC 600............................................................. $189
BISC 812............................................................. $225

Earth Sciences
EASC 603................................................................ up to $50
EASC 606................................................................ up to $3,000
EASC 611.............................................................. up to $150
EASC 617.............................................................. up to $50
EASC 619.............................................................. up to $100
EASC 624.............................................................. up to $250

Geography
GEOG 612........................................................... $100
GEOG 617........................................................... $15
GEOG 628........................................................... up to $50

Marine Science
All MASC courses offered at the Western Canadian Universities Marine Biological Station (Bamfield) ................................................................................ $137 per credit hour

Resource and Environmental Management
REM 698............................................................. $150

Time of Payment
In order to enroll, students must have a credit balance of at least $100 in their accounts. Students must be enrolled for the term before any payment of graduate awards can be made in that term. A student applying for Canada student loans should make arrangements to pay fees from other sources, as loans cannot be authorized until the student is officially enrolled.

See “Payment of Fees” on page 39 for a description of various payment methods.

Refunds
Withdrawal from Program
If a student withdraws from the graduate program without completing the degree before the end of the term, refunds will be calculated from the date the student officially notifies the registrar in writing of his/her withdrawal from the University. Withdrawal in the first month of the term will result in a refund of 50% of the tuition fees payable. No other refund will be made.

Change of Fee Status
Changes from one program to another (e.g. masters to doctoral; transfer between programs) are made effective at the start of a term. Mid-term changes are not permitted.

Overdue Accounts
Students with overdue accounts will be considered to be in bad financial standing and will be precluded from enrolling in subsequent terms. In addition the University will withhold certain services, including but not limited to the release of various letters and...
documents such as official transcripts of academic record and parchments for degrees, diplomas and certificates. An account that is delinquent without approved resolution will be forwarded to a collection agency for appropriate action.

A student who presents payment in the form of a cheque that is subsequently returned by the student’s financial institution for lack of sufficient funds or because a stop payment has been placed on that cheque will be assessed a penalty fee of $25. In the event that a student on more than one occasion submits a cheque that is dishonored for any reason, the University reserves the right to require all future financial transactions with the University to be by cash, certified cheque or money order. The University may cancel a student’s enrollment in a term when payments made by the student are subsequently dishonored by the student’s financial institution. Late payment fees will apply.

Students with overdue accounts will be assessed a late fee penalty on outstanding fees. 2% (24% per annum) will be assessed after the last day of the sixth week of classes and an additional 2% will be assessed each month thereafter, regardless of any pending scholarships, bursaries, awards, tuition waivers and school associate certificates. Total penalties will be adjusted to conform to Canadian laws and regulations when the final payment is made.

Course Drop
Students in per-term fee programs are not eligible for refunds if they drop one or more courses.

Students in per credit fee programs who drop a course before the end of the fourth week of the term will receive a full refund of tuition fees for that course.

No refunds will be given for courses dropped after that date.

Students in per-term programs who wish to drop all courses should first contact the director, graduate records and admissions to discuss their status in the program. Students in per credit fee programs who drop all courses before the end of the fourth week of the term will receive a 50% refund of tuition fees for those courses. No refunds will be given if all courses are dropped after that date.

Completion of Program
If a student completes all degree requirements during the term, the following refund schedule for tuition fees payable in that term will apply. No other fees are eligible for refund.

Completion in the first month of the term
Refund of 75% of fees payable for the term.

Completion in the second month of the term
Refund of 50% of fees payable for the term.

Completion in the third month of the term
Refund of 25% of fees payable for the term.

Refunds to students in per term fee programs will only be made to students who are paying the continuing fee.

Refunds to students in per credit fee programs will only be made to students who are enrolled in a “project completion” or “thesis completion” course.

Fee Waiver
For students in per term fee programs, on-leave fees may be waived in exceptional circumstances, for example, accident, illness or parenting, on the basis of medical documentation.

Fees for Courses at Another Institution
Except for situations covered by the Western Deans’ Agreement, a student enrolled at Simon Fraser University who takes a course at another institution of higher learning and has had this course approved in advance for credit towards the graduate program (see General Regulations) is responsible for enrolling at the other institution and paying fees assessed by that institution. When the student produces satisfactory evidence of tuition fee payment at the other institution, the Simon Fraser University fees for that term will be decreased by this amount. The Simon Fraser University fee paid for that term will be refunded to an amount not to exceed the lesser of the two amounts.

A student in a per term fee program must maintain enrollment at Simon Fraser University, and may not enroll on leave. A student is a per credit fee program must enroll for the same number of credit hours at Simon Fraser University as are to be taken at the other institution.

Full Time and Part Time Attendance
All graduate students in per term fee programs are considered full time students.

All graduate students enrolled for thesis, project or field exams are considered full time students.

Graduate students in per credit fee programs who enroll for six or more credit hours in a term are considered full time students.

Tuition Fee Certificates (T2202A)
See “Tuition Fee Certificates (T2202A)” on page 40.
Financial Aid for Graduate Students

Graduate students are eligible for a variety of financial assistance programs including entrance or continuing scholarships, graduate fellowships, awards, bursaries and loans.

Scholarships and fellowships recognize outstanding academic achievements; awards generally acknowledge outstanding achievements or community contributions. Bursaries are awarded on the basis of financial need. Government student loans are awarded on the basis of financial need by the student's province of residence. Emergency loans are available from the Academic Resources Office, to students in short term financial crisis.

Other sources of income are teaching assistantships (TAs) and research assistantships (RAs) which are available in most departments. Applications should be directed to the chair of the appropriate graduate program committee in the intended department.

All graduate scholarship and financial assistance programs are administered by one of two University units. Merit based graduate scholarships and awards (cumulative grade point average of 3.50 or better) are administered by the Dean of Graduate Studies Office, room 1100, Maggie Benston Student Services Centre, Tel: 778.782.5411, Fax: 778.782.3080.

Generally, the financial needs-based graduate scholarships, bursaries and loans, including Government student loans and emergency loans, are administered by the Financial Aid and Awards Office, Maggie Benston Student Services Centre, Tel: 778.782.4356. They include the Canada Student Loan Program, the Work Study Program and graduate bursaries.

Categories of Graduate Scholarships, Awards, Bursaries and Stipends

Merit-based awards available to graduate students and post doctoral researchers from internal and external sources are listed in the graduate awards guide. The guide is available on the Dean of Graduate Studies website at http://www.sfu.ca/dean-gradstudies/current/funding/awards.html

Every attempt has been made to provide up-to-date information. However, it remains the prerogative of the award-granting agencies to change deadline dates, discontinue awards, etc. without prior notice.

Award Categories

Awards that are administered by the Dean of Graduate Studies Office:

- Simon Fraser University Entrance Scholarships (page 254)
- Awards for New and Continuing students (page 255)
- Private Awards (page 255)
- University Administered External Awards (page 261)
- Externally Administered Awards (page 263)

Awards, bursaries and loans administered by Financial Aid and Awards, Student Services:

- Bursaries Administered by the University (page 263)
- Awards for All Students (page 264)
- Bursaries for Applied Sciences Students (page 265)
- Bursaries for Arts and Social Sciences Students (page 265)
- Bursaries for Business Administration students (page 266)
- Bursaries for Education Students (page 266)
- Bursaries for Health Sciences Students (page 267)
- Bursaries for Science Students (page 267)

International Students

Students who are not Canadian citizens and who would require financial assistance to attend must seek such assistance in their country of origin before arrival in Canada. Many outside awards are restricted to Canadian citizens or permanent residents. However, foreign students are eligible for most awards granted by the University when they are accepted for admission into a graduate program.

General Information and Regulations

The following regulations apply generally to all financial assistance administered by the University.

- Plan and apply well in advance as many scholarship deadlines occur between 4 and 12 months before the granting of the award. Application deadlines are listed for each award on the following pages. Please note that the published deadlines are approximate dates only, and are subject to change by the awarding agency.
- All scholarships and awards are given on the recommendations of the Senate Graduate Awards Adjudication Committees. Committee decisions, when announced, are final.
- The University does not guarantee the payment of any scholarships, awards or bursaries listed in the Calendar other than those provided directly from funds of the University. If invested funds do not provide the necessary income for an endowed scholarship, award or bursary, payment of the award may be reduced or the award withheld. The University reserves the right to withhold awards donated by individuals or organizations where funds required have not actually been received.
- The University reserves the right to refrain from making an award if, in its opinion, none of the applicants meets the terms specified.
- The individual graduate student is responsible for knowing deadlines, proper completion of application forms and supplying all appropriate documentation for the various scholarships, awards and bursaries.
- Incomplete applications may be rejected.
- The following awards are contingent upon the availability of funds. Further information is available from the Dean of Graduate Studies Office, MBC 1100. Completed application forms and all required documentation should be submitted to the Graduate Secretary in the applicant's department of enrolment by the indicated deadlines, unless specified otherwise.

Special Awards

Academic and Service Awards

Terms of reference: Graduate students are eligible for many of the University Service Awards listed in the undergraduate Financial Assistance and Awards section of the Calendar. Please refer to this section for detailed information.

Athletic Awards

Terms of reference: Graduate students who compete on a Simon Fraser University varsity team may be eligible for Athletic Awards. Please refer to the undergraduate Financial Assistance and Awards section of the Calendar for further information. See “Financial Aid and Awards” on page 41.

Dean of Graduate Studies Convocation Medals

Application deadline: April 25

Terms of reference: A silver medal has been established for a graduating graduate student from each faculty. The dean of the respective faculty will recommend a student who has achieved the highest level of academic excellence in his/her graduate program.

The criteria for selection of special awards are quality of work, cumulative GPA, and timeliness of completion of the degree. All recommendations are to be forwarded to the Dean of Graduate Studies by April 25.

Governor General’s Gold Medal

Application deadline: April 25

Terms of reference: The Governor General’s Gold Medals will be awarded to the students who achieve the highest academic standing in his/her master’s or doctoral degree program. The two students selected will be from different faculties.

Entrance Scholarships

Deloitte Graduate Entrance Scholarship

Value: $7,000

Application deadline: September 30 (by nomination)

Tenable: Fall term

Terms of reference: For a full-time student entering the Master of Risk Management program.

Wm. F. and Ruth Baldwin Graduate Scholarship in History

Value: $8,000

Application deadline: March 15

Tenable: Two consecutive terms

Terms of reference: One or more, two-term awards. Preferentially to an incoming student pursuing a graduate degree in British history.

Gary Brent Global Asset and Wealth Management Scholarship in Business Administration

Value: $10,000

Application deadline: May 30 and/or September 30 (by nomination)

Tenable: Three consecutive terms

Terms of reference: One award annually to a full-time student entering the Global Asset and Wealth Management MBA Program after having spent a minimum of at least two years employed in the financial industry in a professional capacity.

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scholarship winner will be introduced to Gary Brent during tenure of the award. A student will be nominated for the award by the director of the program.

**Graduate Entrance Scholarship in Business Administration**

Value: $1,000

Application deadline: March 15

Tenable:Any term

Terms of reference: An award for a student entering a graduate degree program in business administration in the Faculty of Business Administration.

**Douglas Cole Memorial Graduate Entrance Scholarship in Cultural History**

Value: $600

Application deadline: March 15

Tenable: Fall

Terms of reference: One award will be awarded to a student entering the graduate program in history whose focus will be on cultural history.

**DuPont Graduate Entrance Scholarship in Chemistry**

Value: $1,500

Application deadline: March 15 (by nomination)

Tenable: Any term

Terms of reference: Two scholarships will be awarded to the top entering graduate students in the Department of Chemistry. Candidates will be judged on their scholastic and research achievements and potential. Students must be nominated by their intended department.

**Thelma Finlayson Graduate Entrance Scholarship**

Value: $6,000

Application deadline: March 15

Tenable: Fall term

Terms of reference: A minimum of three scholarships are available each year to full-time students pursuing studies towards the Master of Pest Management degree.

**Arthur and Ancie Fouks Graduate Entrance Award in Public Service**

Value: $4,000

Application deadline: March 15 (by nomination)

Tenable: Any term

Terms of reference: One award to recognize both outstanding academic performance and a high level of public service by a student entering a graduate program at Simon Fraser University. Student must be nominated by his/her intended department.

**Global Asset and Wealth Management Business Council Scholarship in Business Administration**

Value: $5,000 to $6,000

Application deadline: May 30, September 30, January 30 (by nomination)

Tenable: Final two terms of the program

Terms of reference: Up to ten scholarships per calendar year, to full-time students entering the Global Asset and Wealth Management MBA program after having spent a minimum of at least two years employed in the financial services industry in a professional capacity. Students will be nominated for these awards by the director of the program.

**Graduate Entrance Scholarship in Geography**

Value: $2,500

Application deadline: March 15

Tenable: Any term

Terms of reference: One award for a student entering a graduate program in geography.

**Bert Henry Memorial Graduate Scholarship**

Value: $18,000 (subject to funding)

Application deadline: March 15

Tenable: Three consecutive terms

Terms of reference: The recipient is an outstanding student who has obtained a master’s degree and is entering any PhD program. The recipient must show high academic performance and potential for significant contribution to the chosen field of study. Tenure is for one year and may commence in any term.

**C.D. Nelson Memorial Graduate Scholarships**

Value: $18,000

Application deadline: March 15

Tenable: Three consecutive terms

Terms of reference: Recipients are outstanding scholars entering any graduate program. Twelve or more awards are made. Tenure is for one year and may commence in any term.

**Master of Pest Management Graduate Entrance Scholarship**

Value: $500

Application deadline: March 15

Tenable: Fall term

Terms of reference: One award for a student entering a graduate degree program leading to the Master of Pest Management degree in the Centre for Environmental Biology.

**Graduate Entrance Scholarship in Political Science**

Value: $1,500

Application deadline: March 15 (by nomination)

Tenable: Any term

Terms of reference: One award for a student entering an MA or PhD program in political science.

**Faculty of Science Graduate Entrance Scholarship**

Value: $1,700

Application Deadline: March 15 (by nomination)

Tenable: Fall term

Terms of reference: One award for a student from the University College of the Fraser Valley entering the MSc program in a department in the Faculty of Science at Simon Fraser University.

**Scott Paper Limited Bicultural Graduate Entrance Fellowship**

Value: $15,000

Application deadline: March 15

Tenable: Three consecutive terms

Terms of reference: The recipient is an outstanding student who has received a previous degree at a University in the province of Quebec and is entering any Simon Fraser University graduate program. One award is made. Tenure is for one year and may commence in any term.

**Simons Foundation Doctoral Entrance Fellowship (for Women)**

Value: $17,000

Application deadline: March 15

Tenable: Three consecutive terms

Terms of reference: The recipient is an outstanding woman scholar entering any PhD program at Simon Fraser University. The recipient must show potential for significant contribution to society through achievement in her chosen field. One award is made. Tenure is for one year and may commence in any term.

**O.H. Sorria Memorial Graduate Scholarship in Philosophy**

Value: $500

Application deadline: March 15

Tenable: Fall term

Terms of reference: One scholarship for a student entering a Master of Arts Program in the Department of Philosophy. Preference is given to a student coming from overseas, but intending to return to their homeland after degree completion.

**Southam Inc. Graduate Entrance Scholarship in Publishing**

Value: $3,000

Application deadline: March 15

Tenable: Any term

Terms of reference: One award for a student entering the Master of Publishing Program.

**Special Graduate Entrance Scholarship**

Value: $2,000-$7,000

Application deadline: any term, by nomination

Tenable: September, January or May

Terms of reference: One term awards between $2,000 and $7,000 to students entering a new graduate program at Simon Fraser University. To be eligible, a student must show academic excellence and proof that he/she is being actively recruited by another university. Students must be nominated by their graduate program chair in their intended department to the dean of graduate studies.

**William and Ada Isabelle Steel Memorial Graduate Scholarship**

Value: $17,000

Application deadline: March 15

Tenable: Any term

Terms of reference: One award for a student entering a graduate program in the Department of English.

**Dorothy Middler Thomas Graduate Entrance Scholarship in English**

Value: $500

Application deadline: March 15

Tenable: Any term

Terms of reference: One or more scholarships will be awarded to graduate students entering the doctoral program in Economics. The fund honors Dorothy Wilkinson, Economics Departmental Assistant, friend and mentor to many. Students must be nominated by the department by March 15.

**Grace Woodsworth MacInnis Graduate Scholarship in Economics**

Value: $1,500

Application deadline: March 15 (by nomination)

Tenable: Any term

Terms of reference: One or more scholarships will be awarded to graduate students entering the doctoral program in Economics. The fund honors Grace Woodsworth MacInnis in recognition of her outstanding contribution as a Canadian parliamentarian and a pioneer woman in Canadian politics. The award supports a student entering the graduate program in Women’s Studies.

**Awards for New or Continuing Students**

**Graduate Fellowships**

Value: $6,250

Application deadline: April 15

Tenable: Any term

Terms of reference: Recipients are full time students in any Simon Fraser University graduate program. Awards are made on the basis of academic merit; the normal minimum criterion for eligibility is a 3.5 CGPA. These are one term awards valued at $6,000. Students may apply in an annual competition for graduate fellowships tenable in one, two or three terms.

**Faculty of Applied Sciences Dean’s Fund Graduate Fellowships**

Value: $3,000

Application deadline: April 15

Tenable: Any term, subject to funding
Terms of reference: one term awards. Recipients are full time students in a graduate program in the Faculty of Applied Sciences. Awards are made based on academic merit (minimum of 3.50 cumulative grade point average) and good standing in research ability. Fellowship is based on matching basis: half from the Faculty of Applied Sciences and the other half from the thesis supervisor by way of a research assistantship.

President’s PhD Research Stipends
Value: $6,250
Application deadline: end of the second month of the term preceding the term of tenure.
Tenable: Any term

Terms of reference: These are one term awards available to all full-time PhD students who have completed all degree requirements with the exception of the thesis. Students may receive the award only once during their doctoral program.

The following awards are contingent upon the availability of funds. Detailed information is available from the Dean of Graduate Studies Office, MBC 1100. Completed application forms and all required documentation should be submitted to the Graduate Secretary in the applicant’s department of enrolment by the indicated deadlines, unless specified otherwise.

Private Awards

The following awards are contingent upon the availability of funds.

J. Abbott/M. Fretwell Graduate Fellowship in Fisheries Biology
Value: $4,000
Application deadline: September 30
Tenable: spring term

Terms of reference: One fellowship to a graduate student demonstrating academic merit in fisheries biology. Preference will be given to an applicant with a strong sports background. This fellowship was established in memory of Jeremy Abbott and Michael Fretwell after their death in a tragic helicopter accident in September 1989.

Access Copyright Graduate Award in Publishing Studies
Value: $1,800
Application deadline: September 30
Tenable: spring term

Terms of reference: One award to a graduate student in the Master of Publishing Program, demonstrating experience within the Canadian book publishing and/or periodical and/or music publishing sector.

M.D. Angus & Associates Graduate Fellowship in Psychology
Value: $900
Application deadline: September 30
Tenable: spring term

Terms of reference: One award to a graduate student in the Master of Psychology Program, demonstrating experience within the Canadian book publishing and/or periodical and/or music publishing sector.

Archaeometry Prize
Value: $200
Application deadline: April 15
Tenable: summer term

Terms of reference: A prize will be awarded annually in the summer term. The prize will be available to either an undergraduate or graduate student who has shown exceptional scholarship and an interest in the application of physical science to archaeology. Contact Financial Assistance and Awards, Student Academic Resources, Maggie Benson Student Services Centre.

Association of Women in Finance Graduate Scholarship
Value: $1,500
Application deadline: May 30 (by nomination)
Tenable: fall term

Terms of reference: A one-term award for an outstanding student pursuing a Master of Business Administration, with past work experience in the field of finance and future plans to pursue a career in the area of finance.

David L. Baillie Graduate Fellowships in Molecular and Cellular Biology
Value: $2,500
Application deadline: May 31
Tenable: fall term

Terms of reference: Two awards annually, valued at $2,500 each, to students pursuing a PhD degree in the molecular biology and biochemistry department. Students can be pursuing any field of study within the department and must have completed a minimum of two years towards their PhD program at the time of application.

BCAA Environmental Studies in Transportation Award
Value: $700
Application deadline: September 30
Tenable: spring term

Terms of reference: One award to recognize outstanding academic performance by a graduate student whose thesis research is related to the study of land-based transportation systems and their relationship to, and improvement of, the environment.

BC Council of Garden Clubs -- Mildred Wells Scholarship
Value: $1,000
Application Deadline: May 30
Tenable: fall term

Terms of reference: A scholarship for a student in the Master of Pest Management Program whose course of studies emphasizes horticultural pest control. The recipient must be a Canadian citizen.

Aphra Behn Graduate Scholarship in English
Value: $7,000 each
Application deadline: May 30
Tenable: fall, spring or summer term

Terms of reference: One or more, one-term awards supported by the Ann Messenger endowment. For a mature (minimum age 30) female student pursuing a graduate degree program in English and conducting research, preferably in pre-20th century English literature.

B.P. Beirne Prize in Pest Management
Value: $1,200
Application deadline: April 30 (by nomination)
Tenable: Any term

Terms of reference: An annual prize with accompanying certificate will be awarded during May of each year to the outstanding graduate from the master of pest management program in the three terms immediately preceding Convocation. The award is in honor of the late Dr. B.P. Beirne, founder of the Centre for Environmental Biology at Simon Fraser University. It will be made by nomination by the director of the Centre for Environmental Biology. The candidate will be judged equally on his or her scholastic record, professional paper and relevant professional attributes. The student must be nominated by the department by April 30.

Margaret Lowe Benston Memorial Graduate Bursary in Women’s Studies
Value: $1,500
Application deadline: May 30
Tenable: fall term

Terms of reference: A one term award for students in the MA or PhD program in Women’s Studies, with demonstrated financial need.

Marilyn Bowman Graduate Scholarship in Psychology
Value: $1,000
Application deadline: September 30 (by nomination)
Tenable: spring term

Terms of reference: An award for a graduate student who has completed his/her master’s degree in clinical psychology and is enrolled in the PhD clinical program in the Department of Psychology. Where possible, preference will be given to a Canadian citizen or landed immigrant. A student will be nominated for the award by the chair of the Department of Psychology.

Gene Bridwell Graduate Scholarship in Special Collections
Value: $1,000
Application deadline: October 15
Tenable: fall term

Terms of reference: An award for a graduate student at SFU or enrolled at a university outside the Lower Mainland who demonstrates scholarly interest or creative achievement related to SFU’s Contemporary Literature Collection. Applicants submit an outline of studies and relevance to the SFU Contemporary Literature Collection directly to the Dean of Graduate Studies.

Burnaby Rhododendron and Garden Society Scholarship
Value: $500
Application deadline: September 30
Tenable: fall term

Terms of reference: A one term award for a student in a master’s or post-graduate program. Applicants will be evaluated based on previous contributions to pest management, performance in graduate course work, conference presentations and community engagement.

Roy L. Carlson Graduate Scholarship in Prehistoric British Columbia Archaeology
Value: $5,000 each
Application deadline: May 30 (by nomination)
Tenable: fall term

Terms of reference: A one-term award for a graduate student in archaeology whose research is on the prehistoric archaeology of BC. Eligible thesis topics include those based on analysis of BC archaeological collections held by the SFU Museum of Archaeology and Ethnology. Where possible, preference will be given to a Canadian citizen or landed immigrant. A student will be nominated for the award by the Department of Archaeology’s graduate program committee.

Phyllis Carter Burr Graduate Scholarship in Developmental Biology and Cell Biology
Value: $750
Application deadline: September 30
Tenable: any term

Terms of reference: One award annually for graduate students in any department who intend to pursue an academic research career specializing in developmental biology and/or cell biology. Currently this would include students in the departments of Biological Sciences, Molecular Biology and Biochemistry in the Faculty of Science and the School of Kinesiology in the Faculty of Applied Science. Preference will be given but not restricted to, female applicants.

Cable Television Pioneer Graduate Scholarship
Value: $950
Application deadline: September 30
Tenable: spring term

Terms of reference: One scholarship for a graduate student in Communication specializing in communication policy.

Canadian Fishing Company Graduate Scholarship
Value: $1,000

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Application deadline: September 30
Tenable: spring term
Terms of reference: One scholarship will be awarded to a graduate student working towards the degree of Master of Science or Doctor of Philosophy specialising in fish biology or aquatic ecology.

CanWest Global Graduate Fellowship in Communications
Value: $10,500
Application deadline: September 30
Tenable: summer term
Terms of reference: One or more scholarships awarded annually to graduate students in the School of Communication with a particular interest in issues related to broadcasting.

Centre for Systems Science/Faculty of Applied Sciences Graduate Student Award
Value: $6,000
Application deadline: by nomination
Tenable: fall term
Terms of Reference: A one-term award for outstanding Canadian students in their second year of a graduate studies program, master’s or doctoral, in the Faculty of Applied Sciences.

Chemistry Alumni Graduate Scholarship
Value: varies
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of Reference: Awards equal to one term’s tuition fees will be disbursed to one or more candidates in a master’s or doctoral program in Chemistry who do not currently hold an NSERC grant or other award of equal or greater value. Candidates must be nominated for this award by the Department of Chemistry scholarship committee with the approval of the Chair of the Department.

Chemistry Graduate Research Award
Value: $800
Application deadline: May 30
Tenable: fall term
Terms of reference: One award to recognize superior performance in the first year of graduate studies in chemistry.

David and Rachelle Chertkow Healthy Families Essay Prize
Value: $300
Application deadline: January 30
Tenable: summer term
Terms of reference: One award for a graduate student in any Faculty who is pursuing research in the area of healthy families. The prize will consist of the cash award plus a plaque or certificate. The criteria include demonstrated academic excellence at the undergraduate or graduate level and submission of an essay/research paper on promoting healthy families, or prevention of family violence.

Israel Chertkow Memorial Scholarship in Gerontology
Value: $150
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: Awarded to the top graduating student in the Gerontology Diploma Program. It is made by nomination by the Director of the Gerontology Research Centre. Nomination deadline: September 30.

Dr. J.V. Christensen Graduate Scholarship
Value: $3,700
Application deadline: September 30
Tenable: spring term
Terms of reference: One award for a graduate student who is pursuing, or intends to pursue, a graduate degree in history or archaeology.

CIOABC/SAP Graduate Scholarship in Business Administration
Value: $2,000
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: An award for a graduate student in the Faculty of Business Administration preferably with a focus on management information systems. A student will be nominated for the award by the associate dean, MBA programs, Faculty of Business Administration.

Barry Clark Memorial Graduate Scholarship in Pre-Twentieth Century English Literature
Value: $1,000
Application deadline: September 30 (by nomination)
Tenable: fall term
Terms of reference: One award for a graduate student in English, specializing in pre-twentieth century English literature.

Graduate Award in Communication
Value: $5,500
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: A one-term award for a graduate student pursuing an MA or PhD program in the School of Communication. Applicants must have demonstrated involvement in athletics, campus life and/or community leadership. A student will be nominated for the award by the director of the School of Communication.

CN/Joe Segal Graduate Entrepreneurship Award in Business
Value: varies
Application deadline: September 30 (by nomination)
Tenable: fall term
Terms of reference: A one-term award for a student pursuing a graduate degree in Business Administration. Applicants should demonstrate their involvement in entrepreneurial endeavours by providing their resume and cover letter describing their interest and involvement in entrepreneurial pursuits. An applicant will be nominated for the award by the Chair, Faculty of Business Graduate Committee.

Coastal Zone Canada (B.C.) Association Graduate Scholarship in Coastal Studies.
Value: $750
Application deadline: May 30 (by nomination)
Tenable: spring term
Terms of reference: One award for a student pursuing a graduate degree in business focusing on community-based approaches to coastal management, specific to issues within the province of BC. Student must be affiliated with the Centre for Coastal Studies.

COGECO Graduate Scholarship in Communications
Value: $12,000
Application deadline: September 30 (by nomination)
Tenable: spring and summer terms
Terms of reference: One two-term award for a graduate student in Communication.

Samuel and Leatrice Cohen Prize in Environmental Physiology
Value: $600
Application deadline: September 30
Tenable: spring term
Terms of reference: One prize to recognize the best student paper resulting from graduate research in the field of environmental physiology.

The Graduate Prize in Computing Science
Value: $150
Application deadline: January 30 (by nomination)
Tenable: summer term
Terms of reference: One prize is awarded to the top graduate student in computing science from income earned from the Graduate Prize in Computing Science endowment fund.

Cook Conference Scholarship
Value: $1,500
Application deadline: January 30
Tenable: summer term
Terms of reference: One or more scholarships will be awarded to graduate students studying in any field of history on the basis of high academic performance.

Criminology Graduate Student Research and Education Grants
Value: maximum of $250 each
Application deadline: January 15, September 15
Tenable: summer or spring term
Terms of reference: Travel grants for graduate students in the School of Criminology to travel to conduct research or participate at a conference, workshop or attend a course.

Alan Dakin Annual Graduate Award in Hydrogeology
Value: $500
Application deadline: May 30
Tenable: fall term
Terms of reference: To provide support for a graduate student in a master’s or doctoral program in hydrogeology in the Department of Earth Sciences who shows promise of making a contribution to the evaluation, protection and sustainable use of groundwater resources in BC applicants will be evaluated based on their previous contributions to hydrogeology, performance in graduate course work, conference presentations and community engagement.

Isabel Dawson Memorial Scholarship in Gerontology
Value: $2000
Application deadline: September 30
Tenable: spring term
Terms of reference: To provide financial recognition to an outstanding student engaged in research or study in gerontology.

Manuela Dias Memorial Scholarship In Publishing Studies
Value: $500
Application deadline: September 30
Tenable: spring term
Terms of reference: One term award for a student entering or pursuing a Masters degree in Publishing Studies. Applicants must submit at least one short sample of professional, academic or business writing or a portfolio piece.

Gordon Diewart Graduate Scholarship in Kinesiology
Value: $1,000
Application deadline: May 30
Tenable: fall term
Terms of reference: Awarded to a graduate student on the basis of high academic performance and study in the area of motor learning in kinesiology. This fund has been established in honor of Dr. Gordon Diewart for his contribution to the School of Kinesiology at Simon Fraser University.

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Downtown Vancouver Association Graduate Awards in Urban Studies

Value: varies
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: A one-term award to recognize and reward an outstanding student pursuing a graduate degree in Urban Studies who submits the best essay or project in a given year. A student must be nominated for the award by the Chair of the Department.

Doug Drummond Research Fellowship

Value: $2,500
Application Deadline: May 30
Tenable: fall term
Terms of reference: A one-term award for a graduate student pursuing research on subjects related to the planning and management of the environment and infrastructure of the City of Burnaby. The fellowship is granted in recognition of the work of Doug Drummond, who served as City Manager of Burnaby (1996-2002) in building effective relationships between the City of Burnaby and Simon Fraser University.

Dr Ellen Gee Memorial Graduate Scholarship for Excellence

Value: $1,700
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: A one-term award for a student in their first year of study, pursuing a graduate degree in Sociology or Anthropology and whose research is in the area of family, gender, ethnicity, age, health and/or social policy. A student must be nominated for the award by the chair of the department.


Value: $5,000 or $6,000
Application deadline: May 30, September 30, January 30 (by nomination)
Tenable: Final two terms of program
Terms of reference: Up to 10 scholarships per calendar year to attract and provide financial support to full-time graduate students entering the Financial Risk Management Program in the Faculty of Business Administration. Applicants must be nominated for the awards by the Academic Director of the Program.

Robert Hancock Dunham Memorial Scholarship in English

Value: $3,500
Application deadline: June 30
Tenable: fall term
Terms of reference: One award for a student pursuing a graduate degree in the Department of English. Students must be nominated for this award by the chair of the department.

HSBC Graduate Award in Business

Value: $5,000
Application deadline: May 31 (by nomination)
Tenable: fall and spring terms
Terms of Reference: A two-term award for a graduate student who is pursuing, or intends to pursue, a graduate degree in Business Administration at the Segal Graduate School of Business. Applicants must demonstrate financial need and will be nominated for the award by the Dean of the Faculty of Business Administration.

Ebco/Eppich Graduate Scholarships in Intelligent Systems

Value: $700-$1,400 each
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: One or more scholarships valued between $700 and $1,400 each are available to graduate students in computing science, engineering science, resource management, kinesiology, physics, math, statistics, and interactive arts and technology. These are:
- The Ebco/Eppich Graduate Scholarship
- The Helmet Ebco Graduate Scholarship
- The Hugo Ebco Graduate Scholarship
- The Gordon, Monica, and Sonia Ebco Graduate Scholarship
- The Kaltenegger Family Graduate Scholarship
- The Ralph M. Howatt Family Graduate Scholarship
- The Century 21/Charwood Family Graduate Scholarship
- The Frieder Karl Kempe Graduate Scholarship
- The Cy and Gerald Keys Graduate Scholarship
- The Franklin D. and Helen K. Van Pykstra Graduate Scholarship
- The Bel Construction Ltd. Graduate Scholarship
- The Clark, Wilson Graduate Scholarship
- The Canadian Liquid Air Ltd. Graduate Scholarship
- The Hanson Inc. Graduate Scholarship
- The Deskin Sales Graduate Scholarship
- The Jardine Rolfe Ltd. Graduate Scholarship
- The Nova-Tech Engineering Inc. Graduate Scholarship
- The Westak International Sales, Inc. Graduate Scholarship
- The Tranco Tool and Equipment Ltd. Graduate Scholarship
- The ABC Recycling Ltd. Graduate Scholarship
- The Robar Industries Limited Graduate Scholarship
- The Opus Building Corporation Graduate Scholarship
- The Borden Ladner Gervais Graduate Scholarship
- The Pacific Metals/Lon Lutskar Memorial Graduate Scholarship
- The Backwater Industries/Jost Family Graduate Scholarship
- The Global (West) Wholesalers Ltd. Graduate Scholarship
- The Kreykenbohm Family Graduate Scholarship
- The Anna Kreykenbohm Graduate Scholarship
- The Wilhelm Kreykenbohm Graduate Scholarship
- The Michael and Grace Kreykenbohm Graduate Scholarship
- The Kreykenbohm Montgomery, and Anthony Montgomery Graduate Scholarship
- Praxair Inc. Graduate Scholarship

Students are recommended for these awards by the Associate Dean of the Faculty of Applied Sciences to the Dean of Graduate Studies. Application deadline: September 30.

Editors' Association of Canada/Association Canadienne de Réviseurs, BC Branch Graduate Scholarship in Publishing Studies

Value: $250
Application deadline: May 30
Tenable: fall term
Terms of reference: A one-term award for a student pursuing a Master of Publishing degree. Application must be accompanied by a sample of professional, academic or business writing or a portfolio piece.

EMBA Alumni Endowment Fund Entrance Scholarship

Value: varies
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: Either one $10,000 or two $5,000 entrance scholarships per year to provide financial support for outstanding graduate students entering the Executive MBA program in the Faculty of Business Administration (EMBA). Students will be nominated for the award and must have demonstrated career progression and potential for future career achievements as well as demonstrated outstanding leadership or service to the community. Students will be nominated for the award by the associate dean, Segal Graduate School of Business.

Emergency Preparedness Conference Scholarship in Emergency Communications

Value: $3,500
Application deadline: September 30
Tenable: spring term
Terms of reference: An award to provide financial support for a graduate student in the School of Communication or other appropriate area in the emergency communications field, pursuing an applied research project in the area of emergency/disaster management.

Faculty of Education Field Programs Research Fellowships

Value: $2,400 (Master’s) $2600 (PhD)
Application Deadline: by the end of the second month of the term preceding the term of tenure
Tenable: any term
Terms of Reference: A one-term award for students who have identified the topic of “teacher inservice professional development” as their area of interest and plan to undertake a thesis in which the investigation is closely related to the work of field programs in the Faculty of Education. Students may receive the award only once during the term of their graduate program.

Dr. E.A. Fathah Graduate Scholarship in Criminology

Value: $2,500
Application deadline: September 30
Tenable: spring term
Terms of reference: An award to a graduate student in Criminology pursuing graduate work in the area of victimology. Student should show promise of outstanding achievement at the graduate level with particular emphasis on intellectual ability, originality and ability in research.

Dr. Marguerite Faulquenoy Graduate Scholarship in French

Value: $500
Application deadline: September 30 or January 30
Tenable: spring or summer term
Terms of reference: One award to a graduate student who has completed at least one term of graduate work at Simon Fraser University in the area of French linguistics, varieties of French, French-based Creoles, French literature, or French studies.

Barbara Ferrier Chemistry Research Award

Value: $1,000
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: One award for a student in a graduate program in chemistry to help with the costs associated in attending an academic conference. Students will be evaluated based on their previous annual progress. Evidence of a suitable conference with a high impact for the student's program must be included as part of the nomination package, as well as a concise outline of the proposed benefits of attending the conference.

Professor Thelma Finlayson Fellowship

Value: $4,000
Application deadline: September 30
Tenable: spring term
Terms of reference: Professor Thelma Finlayson has established a fellowship to be offered to graduate students pursuing studies toward the Master of Pest Management degree. Preference will be given to students working in the field of entomology.

French Memorial Graduate Scholarship

Value: $1,200
Application deadline: May 30
Tenable: fall term
Terms of reference: One award for a graduate student in French.

Mahatma Gandhi Memorial Scholarship in Kinesiology

Value: $700
Application deadline: September 30
Tenable: spring term
Terms of reference: An award to provide financial support for a graduate student in the School of Communication or other appropriate area in the emergency communications field, pursuing an applied research project in the area of emergency/disaster management.
Application deadline: January 30
Tenable: summer term
Terms of reference: A scholarship will be awarded to a Wild Crafts graduate student whose research interests are in the areas of nutrition and/or aging. Preference may be given to students who are considered to be deserving and financially needy.

Glen Geen Graduate Scholarship in Marine Biology
Value: $800
Application deadline: September 30
Tenable: spring term
Terms of reference: One award for a graduate student in Biology Sciences with a concentration on marine biology.

Michael Geller Graduate Scholarship in Urban Development
Value: $5,000
Application Deadline: May 30
Tenable: fall term
Terms of Reference: A one-term award to provide financial support to a Master’s or Ph.D. student whose research focuses on urban development.

German Canadian Benevolent Society of British Columbia Aulinger Award in Gerontology
Value: $600
Application deadline: September 30
Tenable: spring term
Terms of reference: The Aulinger Award in Gerontology provides financial support for a graduate student pursuing a master’s degree in Gerontology. Emphasis is on high academic performance and a research focus on aging and the built environment or on health promotion and aging.

Faculty of Health Sciences Faculty and Staff Community Health Practice Award
Value: varies $500 – $1,000
Application deadline: January 30
Tenable: summer term
Terms of reference: An achievement award for graduate students in the Faculty of Health Sciences who are pursuing relevant practica. The award is intended to defray costs to participate in field research. Applicants must submit a two-page description of the proposed practicum, its relevance to the applicant’s research area, and a projected budget (travel and living costs) along with their application.

Faculty of Health Sciences Faculty and Staff Community Health Practice Awards
Value: varies
Application deadline: January 30
Tenable: summer term
Terms of reference: Up to ten achievement awards per year ranging in value between $500 and $1,000 will be given to graduate students in the Faculty of Health Sciences who are applying for a full-time practicum term for the summer term and intend to use the award to help defray costs to participate in field research in health sciences.

Sidney Hogg Memorial Graduate Scholarship
Value: $750
Application deadline: September 30
Tenable: spring term
Terms of reference: Mrs. Sidney Hogg has established an endowment, the earned income of which will go to provide a perpetual scholarship annually. This scholarship is to be awarded to a graduate student in science who needs financial assistance in order to continue studies and who is qualified in terms of character and scholarship. The award may be held in conjunction with other awards.

Don and Pat Hudson Scholarship in International Business Relations
Value: $1,000
Application deadline: January 30 (by nomination)
Tenable: summer term
Terms of reference: One award for a student studying international business relations as part of their graduate business degree in the Faculty of Business Administration. Students will be nominated for the award by the director of the MBA program and the associate dean of business administration.

Imperial Order of the Daughters of the Empire Seaman Morley Scott Memorial Graduate Scholarship
Value: $300
Application deadline: September 30
Tenable: spring term
Terms of reference: A graduate scholarship in memory of Dr. Seaman Morley Scott will be awarded annually to a female graduate student who is a Canadian citizen who demonstrates high meritful performance in her academic program.

International Reading Association Scholarship
Value: $700
Application deadline: January 30
Tenable: summer term
Terms of reference: One scholarship awarded to a full or part time graduate student pursuing studies in literacy education.

Daniel Janzen Memorial Graduate Scholarship
Value: varies
Application deadline: September 30
Tenable: spring term
Terms of reference: Established in memory of Daniel Janzen by his friends and family. To provide financial support to a graduate student studying for an MA degree in economics, public policy, or political science, or an MBA in business administration. Preference, when possible, will be given to a student coming to Simon Fraser University from the University College of the Fraser Valley.

Billy Jones Memorial Graduate Scholarship
Value: $2,800
Application deadline: September 30 (by nomination)
Tenable: fall term
Terms of reference: An award for a graduate student in physics, was established in honor of the late Dr. B.L. Jones, a faculty member in the Physics Department from 1967 to 1981. Students must be nominated for this scholarship by the Chair of the Department.

Kaiser Foundation Graduate Scholarship in Engineering Science
Value: $2,000
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: To provide financial support for a student pursuing a master’s or Ph.D. degree in the School of Engineering Science. A student will be nominated for the award by the chair of the School of Engineering Science.

London Drugs 60th Anniversary Awards
Value: $1,000
Application Deadline: ?
Tenable: fall term
Terms of Reference: For graduate or undergraduate students in any Faculty whose volunteer activities have made a significant contribution to the development and/or improvement of campus community life. Candidates must include demonstrated involvement in unpaid volunteer activities in their resume and a cover letter describing their volunteerism, length of service and time committed to such interests.

Dr. Tai Whan Kim Memorial Graduate Scholarship in Languages and Linguistics
Value: $1,000
Application deadline: May 30
Tenable: fall term
Terms of reference: One award for a graduate student pursuing a master’s or Ph.D. degree in romance languages, romance linguistics or a related field.

Meredith Kimball Graduate Entrance Scholarship in Women’s Studies
Value: $500
Application Deadline: March 31 (by nomination)
Tenable: fall term
Terms of Reference: One scholarship is available for a student entering a graduate program in the Department of Women’s Studies. Applicants must be nominated for this award by the Chair of the Graduate Program.

Leon J. Laidner Graduate Scholarship in B.C. History
Value: $500
Application deadline: January 30
Tenable: summer term
Terms of reference: One or more scholarships for graduate students possessing high academic standing and a special aptitude for research and wishing to undertake postgraduate work in the field of British Columbia history.

Law Foundation Graduate Scholarship in Restorative Justice
Value: $2,500
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of Reference: For a student who is pursuing or intends to pursue a graduate degree in Criminology focusing on research conducted within the Centre for Restorative Justice. A student will be nominated for the award by the Co-directors of the Centre for Restorative Justice.

Peter Legge Graduate Volunteer Leadership Award in Business
Value: $5,000
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: A one term award for a student entering or pursuing a graduate degree in Business Administration at the Segal Graduate School of Business. To be eligible candidates should demonstrate their involvement in unpaid volunteer activities by providing their resume and cover letter describing their volunteerism, the length of service and time commitment dedicated to such interests. Applicants must be nominated for the award by the Dean of the Faculty of Business Administration.

Linguistics Graduate Scholarship
Value: $500
Application deadline: May 30
Tenable: fall term
Terms of Reference: To provide financial support for a student in a Master’s program in Linguistics. Preference will be given to candidates who have not received the award before.

H.R. McCarthy Graduate Bursary
Value: $6,000
Application deadline: September 30
Tenable: spring term
Terms of reference: The H.R. McCarthy Bursary Endowment Fund provides financial support for a graduate student in biological sciences with preference given to a student studying the biology and management of pest organisms. The award will be based on financial need, good academic standing, and promise of service to mankind through the application of science.

Weyerhaeuser Molecular Biology Graduate Scholarship
Value: $4,400 (MSc)
Application deadline: September 30
Tenable: spring term
Terms of reference: One or more scholarships for Master of Science students carrying out research in**
the Department of Molecular Biology and Biochemistry.

**MacMillan Bloedel MBB Graduate Scholarship**
- Value: $5,000 (PhD)
- Application deadline: September 30
- Tenable: fall, spring or summer
- Terms of reference: One or more scholarships for Doctor of Philosophy students carrying out research in the Department of Molecular Biology and Biochemistry.

**Marie Magrega Memorial Graduate Award in Gerontology**
- Value: $500.00
- Application deadline: September 30
- Tenable: any term
- Terms of reference: Established in memory of Marie Magrega by her son, Dr. Dennis Magrega, to promote and encourage the study of Gerontology. One award will be disbursed annually to a graduate student enrolled in the MA program in Gerontology. The student must be nominated by the Director of the Gerontology Program.

**Department of Mathematics Graduate Scholarship**
- Value: $1,000
- Application Deadline: September 30 (by nomination)
- Tenable: spring term
- Terms of Reference: For a student in a graduate program in the Department of Mathematics. The student must be nominated for this award by the chair of the Department of Mathematics.

**Temple Maynard Graduate Scholarship in English**
- Value: $10,000
- Application deadline: May 30 (by nomination)
- Tenable: fall, spring or summer
- Terms of reference: A one term award for a student in a graduate program in English. One or more scholarships will be awarded each year.

**Temple Maynard Memorial Graduate Bursary in English**
- Value: $2,000
- Application deadline: May 30
- Tenable: fall
- Terms of reference: One bursary for a graduate student in English.

**MBB Alumni Graduate Scholarship**
- Value: varies
- Application deadline: September 30
- Tenable: any term
- Terms of reference: One award per year for a student in a graduate program of studies with a focus on teaching or research applicable to British Columbia's poultry, dairy, and/or crop agricultural industries. A student will be nominated for the award by the chair of the Department of Biological Sciences.

**R. Jack Nance Memorial Graduate Scholarship in Archaeology**
- Value: $5,000
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: A one term award for a student pursuing a graduate degree in Archaeology who has completed at least one term of their graduate program.

**National Council of Jewish Women (Vancouver Section) Graduate Scholarship in Women's Studies**
- Value: $700
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: One scholarship of approximately $700 for a graduate student in the first, second or third term of women's studies.

**Hemingway Nelson Architects Graduate Scholarship**
- Value: $1,500
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: One award for a graduate student carrying out research in the Department of Molecular Biology and Biochemistry.

**Marshall Noble Memorial Graduate Bursary in Chemical Ecology**
- Value: $1,000
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: One bursary for a graduate student in the Chemical Ecology Research Group in the Faculty of Science.

**NSERC Graduate Student Conference Travel Grants**
- Value: up to a maximum of $700 (subject to funding)
- Application deadline: one month prior to proposed travel date
- Tenable: any term
- Terms of reference: Applicants must be enrolled full-time in a master’s or doctoral program in a field supported by NSERC in the natural sciences, life sciences and engineering and who are presenting a paper or chairing a session at a national or international meeting of a professional association or equivalent group. Awards are valued up to a maximum of $700 towards the air fare and enrolment fees only.

**Dr. M. Sheila O’Connell Graduate Scholarship in Children’s Literature**
- Value: $1,500
- Application deadline: September 30 (by nomination)
- Tenable: spring term
- Terms of reference: One scholarship will be awarded in the spring term to a graduate student majoring in the field of children’s literature within the Faculty of Education or the Department of English. Students will be nominated by the Faculty of Education and the Department of English.

**Anne Peters Pinto Graduate Scholarship in Women’s Studies**
- Value: $1,500
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: One scholarship will be awarded in the spring term to a graduate student majoring in the field of children’s literature within the Faculty of Education or the Department of English. The scholarship is intended to assist candidates in writing and publishing a children's story.

**Petro-Canada Graduate Scholarship in Earth Sciences**
- Value: $3,000
- Application deadline: September 30
- Tenable: spring term
- Terms of reference: One scholarship will be awarded in the spring term to a graduate student majoring in the field of children’s literature within the Faculty of Education or the Department of English. The scholarship is intended to assist candidates in writing and publishing a children's story.

**Pivotal Scholarship for the Management of Technology MBA Program**
- Value: $10,000
- Application deadline: September 30 (by nomination)
- Tenable: spring term
- Terms of reference: One scholarship to a student pursuing a graduate degree in earth sciences in the Faculty of Science.

**Master’s in Public Policy Scholarship**
- Value: $1,000
- Application deadline: May 30 (by nomination)
- Tenable: fall term
- Terms of reference: One award for a student in the master’s of public policy program with demonstrated evidence of contributions to the field of public policy. Where possible, preference will be given to a Canadian citizen or landed immigrant. A student will be nominated for the award by the graduate program committee in the master’s of public policy program.
Dr. L. B. Peter Rae Memorial Award in Business Ethics
Value: $1,000
Application deadline: September 30
Tenable: spring term
Terms of reference: One award to recognize a student pursuing an MBA or EMBA and whose thesis or MBA project addresses issues in business ethics.
Dr. Donald, Eleanor and Laurie Rix Biotechnology Management of Technology MBA Graduate Entrance Scholarship
Value: $15,000
Application deadline: September 30 (by nomination)
Tenable: spring, summer and fall terms
Terms of reference: A three-term award for a student entering the biotechnology stream of the management of technology MBA program in the Faculty of Business Administration. A student will be nominated for the award by the associate dean, Graduate Programs, SFU Business.
Dr. Donald, Eleanor and Laurie Rix Biotechnology Management of Technology MBA Graduate Scholarship
Value: $5,000
Application deadline: September 30 (by nomination)
Tenable: spring term
Terms of reference: A one-term award available to two graduate students per year in the biotechnology stream of the management of technology MBA program. Students will be nominated for the awards by the associate dean, Graduate Programs, SFU Business.
Rogers Communications Inc. Graduate Scholarship in Communication
Value: $4,000
Application deadline: September 30
Tenable: spring term
Terms of reference: One or more scholarship(s) awarding annually to graduate students in the School of Communication with a particular interest in issues related to broadcasting or cable.
Rotary Club of Burnaby Scholarship
Value: $1,000
Application deadline: September 30
Tenable: spring term
Terms of reference: A scholarship of $1,000 has been established by the Rotary Club of Burnaby for a graduate student in the Faculty of Education in recognition of scholarly merit and the advancement of education practice.
Robert Russell Family/First Nations Graduate Award
Value: varies
Application deadline: May 30
Tenable: fall term
Terms of reference: To provide financial support for a First Nations or Aboriginal student who is entering or pursuing graduate studies in the Faculty of Education, the Faculty of Arts and Social Sciences, the Faculty of Science, the Faculty of Health Sciences, or the Faculty of Applied Sciences.
Phillip Rutherford/Harper Collins Memorial Bookstore Internship
Value: $1,000
Application deadline: September 30
Tenable: spring term
Terms of reference: This award provides a bookstore internship for a student in the Master of Publishing Program, normally in BC for three to four weeks.
William and Jane Saywell Graduate Scholarship in History
Value: $1,000
Application deadline: January 30
Tenable: spring term
Terms of reference: One or more awards for graduate students in History.
Scotiabank Graduate Scholarship for Women
Value: $5,000
Application deadline: May 30 (by nomination)
Tenable: fall and spring
Terms of reference: A two-term award for a female graduate student in a master of business administration program. Preference will be given to a candidate who is, or has been, an entrepreneur, or who plans to study entrepreneurship as part of her degree.
Fung Chan Yee Shan Memorial Scholarship in Gerontology
Value: $1,000
Application deadline: September 30
Tenable: spring term
Terms of reference: An annual scholarship for a student pursuing an MA degree in Gerontology.
Sodexo First Nations Graduate Fellowship
Value: $5,000
Application deadline: May 30
Tenable: fall term
Terms of reference: A one-term award for a First Nations or Aboriginal graduate student who is entering or pursuing a graduate program (Master’s or Doctoral) in any department at Simon Fraser University.
Stevenson Graduate Scholarship in Political Science
Value: $1,250
Application deadline: May 30 (by nomination)
Tenable: fall term
Terms of reference: One award for a student pursuing a master’s or doctoral degree in Political Science, Promise of outstanding achievement at the graduate level with particular emphasis on intellectual ability, originality and ability in research. The student must be nominated by the Political Science Department for the award.
The Sulzer Bingham Pumps Inc. Graduate Scholarship
Value: $1,000
Application deadline: September 30
Tenable: spring term
Terms of reference: One award for a student pursuing a graduate degree in the Faculty of Science or the Faculty of Applied Sciences.
TCG International Graduate Scholarship in Business Administration
Value: $10,000
Application deadline: September 30
Tenable: spring and summer terms
Terms of reference: A two-term award for a graduate student in the Master of Business Administration Program specializing in marketing, international business or policy analysis.
Ethel Barbara Tuck Graduate Scholarship in Education
Value: $12,000
Application deadline: September 30
Tenable: spring and summer terms
Terms of reference: A two-term award for a graduate student pursuing a master’s degree in education who intends to practice as a teacher specializing in remedial reading with children or youth experiencing reading difficulties.
University Women’s Club of Vancouver Graduate Scholarship in Earth Sciences
Value: $1,000
Application deadline: May 30
Tenable: fall term
Terms of reference: A one term award for a female student pursuing a Master’s or Doctoral degree in the Department of Earth Sciences.
VanCity Environmental Graduate Scholarship
Value: $5,000
Application deadline: May 30
Tenable: fall and spring terms
Terms of reference: A two-term scholarship tenable in the fall and spring terms, for a graduate student enrolled in the Natural Resources Management Program who is researching environmental and resource management problems in British Columbia.
Viswanathan-Delor Graduate Endowment Fund
Value: $500
Application deadline: January 30 or May 30
Tenable: fall or summer term
Terms of reference: One award for a graduate student working in the area of French literature.
Lis Welch Graduate Scholarship in Education
Value: $2,800
Application deadline: September 30
Tenable: two consecutive terms
Terms of reference: For a master’s or PhD student in the Faculty of Education. Preference will be given to a Canadian citizen or landed immigrant.
Garfield Weston Foundation/BC Packers Limited Graduate Fellowship in Marine Sciences
Value: $16,000
Application deadline: May 30
Tenable: fall, spring, summer terms
Terms of reference: A one year award for a graduate student in the department of biological sciences pursuing science-based educational, research and/or development activities that support or enhance the aquaculture and/or commercial wild fishing industries in Canada.
Madame Justice Bertha Wilson Graduate Bursary
Value: $250
Application deadline: September 30
Tenable: spring term
Terms of reference: One bursary is available to a graduate student pursuing research that has a focus on the feminist analysis of law and society. Academic excellence and financial need will be considered.
Lang Wong Memorial Endowment Scholarship in Economics
Value: $1,000
Application deadline: January 30
Tenable: spring term
Terms of reference: One scholarship to a graduate student in Economics who has completed one period of graduate study and is a citizen of an Asian developing country.
Lang Wong Memorial Endowment Scholarship in Engineering
Value: $1,000
Application deadline: January 30
Tenable: spring term
Terms of reference: One scholarship awarded annually to a graduate student in Engineering who has completed one period of graduate work and is a citizen of an Asian developing country.
Dr. John Yorston Memorial Graduate Scholarship in Pest Management
Value: $1,000
Application deadline: May 30
Tenable: fall term
Terms of reference: A two-term award for a graduate student in the Master of Pest Management Program specializing in crop protection, plant pathology and nematology.
University Administered External Awards
BC Graduate Research Industrial Internship Program (GRIP)
Value: $15,000 - $10,000 stipend with a $5,000 research grant
Application deadline: none
Tenable: fall, spring or summer term
Available to all faculties, schools and departments at BC universities. It partners graduate student and postdoctoral fellow internships and their supervising professors in any discipline with BC companies, hospitals, government agencies and not-for-profit organizations. Graduate student internships spend 50% of their time over four months on site with the industrial partner researching an issue of interest to all parties. The balance of the intern’s time is spent at SFU further advancing the research under the guidance of their faculty supervisor. The program is administered by MITACS, a federally-funded Network of Centres of Excellence. Apply through www.mitacsinternships.ca

BC Medical Services Foundation Predoctoral Fellowships
Value: $20,000
Application deadline: April 26
Tenable: three consecutive terms
Terms of reference: For outstanding new research scientists in the health sciences, for the first or second year of doctoral study in any discipline (gerontology, kinesiology, psychology, education). Applications related to applied clinical research, population health research, or health systems and services will be considered.

BC Medical Services Foundation summer Research Scholarships
Value: $5,000
Application deadline: January 11
Tenable: summer term
Terms of reference: 15 awards for outstanding graduate students in any discipline in the health sciences (gerontology, kinesiology, psychology, education) to conduct summer research. Application forms are available at www.vancouverfoundation.bc.ca.

Canadian Institutes of Health Research (CIHR)
Value: $17,500
Application deadline: November 1
Tenable: annual
Terms of reference: The Canada Graduate Scholarships Master’s Awards administered by CIHR are intended to provide special recognition and support to students who are pursuing or intend to pursue master’s degree in a health related field in Canada. Candidates are expected to have an exceptionally high potential for future research achievement and productivity. Candidates must have completed or be in the last year of a bachelor’s degree or have been enrolled for more than 10 months as a full time student in a master’s program. Only those students engaged in full time master’s programs in which research is a major component and who are studying under the supervision of faculty members holding research funds obtained through a competitive peer reviewed process are eligible to apply.

Imperial Order of the Daughters of the Empire War Memorial Doctoral Scholarships
Value: $12,000; $15,000
Application deadline: December 1
Terms of reference: Five scholarships will be offered for study towards a doctoral degree (master’s degree or equivalent must be completed or in progress at time of application).
Eligibility: Canadian citizens; must have or be doing postgraduate work. Value: $12,000 for study in Canada, $15,000 for study within the Commonwealth. Note: A candidate must apply in the province of the university from which he/she has graduated. Further information is available from the Office of the Dean of Graduate Studies.

Mackenzie King Open Scholarships
Value: $9,000
Application deadline: February 1
Terms of reference: One award will be offered for study in any field at any university.
Eligibility: Graduates of any Canadian university.
Value: $7,500.
Deadline: February 1 to Dean of Graduate Studies

Mackenzie King Travelling Scholarships
Value: $10,000
Application deadline: February 1
Terms of reference: Four scholarships are available for study in the fields of international or industrial relations (including the international or industrial aspects of law, history, politics and economics).
Eligibility: Graduates of any Canadian university who propose to engage in postgraduate study of international or industrial relations in the United States or the United Kingdom.
Deadline: February 1 to Dean of Graduate Studies.

Minerva Foundation
Value: $10,000
Application deadline: May 1
Tenable: fall and spring terms
Terms of reference: A two-term award for a mature, single woman in a graduate or undergraduate program at SFU. Granted on the basis of financial need and academic proficiency.

Natural Sciences and Engineering Research Council Awards
Value: varies (see below)
Application deadline: October 15
Tenable: annual
Terms of reference: NSERC offers post-graduate awards and post-doctoral fellowships in science including interdisciplinary research, physical geography and experimental psychology, and engineering. Canadian citizens and permanent residents who at the time of application are residing in Canada are eligible. For four categories of post-graduate awards are available:

NSERC PGS M
Value: $17,300 for one year
Application deadline: October 15
Tenable: annual
Terms of reference: Available to students for the first and second years of post-graduate study either at the master’s or doctoral level (MA, MSc, PhD).

NSERC CGS M
Value: $17,500 for one year
Application deadline: October 15
Tenable: annual
Terms of reference: Available to students for the third and fourth year of post-graduate study either at the master’s or doctoral level (MA, MSc, PhD).

NSERC PGS D
Value: $21,000 per year
Application deadline: October 15
Tenable: annual
Terms of reference: Tenable during the third and fourth or fifth and fourth year of doctoral study.

NSERC CGS D
Value: $25,000 per year for up to three years
Application deadline: October 15
Tenable: annual
Website: www.nserc.gc.ca. Further information is available from the Office of the Dean of Graduate Studies.

NSERC Industrial Post-graduate Scholarships (IPS)
Industrial post-graduate scholarships provide financial support for highly qualified science and engineering graduates. The support allows them to gain research experience in industry while undertaking advanced studies in Canada. These scholarships are aimed at encouraging scholars to consider research careers in industry.

IPS 1
Value: $15,000 per year for up to two years plus company contribution of $6,000 minimum per year
Application deadline: may apply at any time
Tenable: annual, during the first three years of graduate study

IPS 2
Value: $15,000 per year for up to three years plus company contribution of $6,000 minimum per year
Application deadline: may apply at any time
Tenable: annual; must be held during the first four years of doctoral studies
Website: www.nserc.gc.ca. Further information is available from the Office of the Dean of Graduate Studies.

NSERC/MITACS Joint Industrial Postgraduate Scholarship (IPS)
Value: $22,500
Application deadline: none
Tenable: Up to three years of funding
Terms of reference: Available to any graduate student in any academic department at SFU using mathematics in their research, such as advanced statistical analysis and the generation of models, simulations, or computer algorithms. For this combined program, students must meet the eligibility criteria of the NSERC Industrial Postgraduate Scholarship (IPS 1 or IPS 2) Program. The company contribution is $7,500, NSERC contributes $15,000 and MITACS contributes $7,500. The student will receive $22,500/year as a scholarship and the academic supervisor will receive the remaining $7,500/year for further research in the specified area. Application is made through the Dean of Graduate Studies Office and MITACS. Go to http://www.nserc.ca/hsf_e.asp?nav=hsfnav&lid=2c and http://www.mitacsinternships.ca for further information, application procedures and requirements.

NSERC Northern Research Internships
Value: $10,000
Tenable: summer term
Application deadline: anytime
Terms of reference: For senior undergraduate or graduate students or post-doctoral fellows pursuing research in the Canadian North, in natural sciences departments or engineering. Must be a Canadian citizen or permanent resident. Contact Dean of Graduate Studies Office for further information.

Northern Scientific Training Program (NSTP)
Value: varies
Application deadline: mid-November latest
Tenable: summer term
Terms of reference: This program is administered by SFU on behalf of the Department of Indian and Northern Affairs to assist with funding of graduate student research. NSTP will help pay for transportation and living costs while conducting practical field experiences in northern Canada.
Eligibility: Students must be Canadian citizens or permanent residents. Further information is available from the Dean of Graduate Studies office, MBC 1100.

Michael Smith Foundation for Health Research Trainee Award Programs
(1) Master’s/Doctoral Studentship Award
Value: $20,000 per year stipend
Research/travel allowance: $2,500 per year
Application deadline: November 1 (approximate in last few years)
Tenable: annual, two years maximum for a master’s award, non-renewable; five years maximum for a doctoral award, or combination of master’s and doctoral awards.
Terms of reference: Open to highly qualified individuals at the master’s and doctoral levels who wish to pursue a career in an area of health research
in BC and whose research fits one of the following: biomedical research, clinical research, research respecting health systems and health services, research on societal, cultural and environmental influences on health and the health of populations. Candidates must be either a Canadian citizen or permanent resident of Canada at the time the award is taken up.

(2)Postdoctoral Fellowship Award
Value: $35,000 to $45,000
Research travel allowance: $4,000 per year
Application deadline: varies
Tenable: Initially for two years, with the possibility of an additional one year extension.
Terms of reference: To enable highly qualified post graduates to prepare for careers in health research as independent investigators in biomedical research, clinical research, research respecting health systems and health services, research on societal, cultural and environmental influences on health and the health of populations.

Information and application forms are available through the Office of the Dean of Graduate Studies, MBC 1100. Applications, guidelines and information regarding eligibility are also available for download from the MSFHR website locate at www.msfhr.org

Social Sciences and Humanities Research Council Awards
Canada Graduate Scholarships (CGS) Master’s Program
Value: $17,500 per year
Application deadline: November 5
Tenable: One year, non-renewable
Terms of reference: Applicants must be applying for support to pursue a first graduate degree and have not completed, by the time of taking up the award, more than 12 months of full-time study.

DCGS Doctoral Scholarships
Value: $35,000 per year for up to three years
Application deadline: November 5
Tenable: Annual
Terms of reference: SSHRC offers doctoral support in the humanities and social sciences. Applicants must be Canadian citizens or permanent residents, living in Canada. Applicants must have completed a master’s degree or at least one year of doctoral study, and will be pursuing full time studies leading to a first PhD or its equivalent. The deadline for applications to the appropriate SFU department is approximately October 15. Website: www.sshrc.ca. Further information is available from the Office of the Dean of Graduate Studies.

SSHRC Doctoral Fellowships
Value: $20,000 per year

Trudeau Foundation Doctoral Scholarship
Value: $50,000
Application deadline: December 1
Tenable: annual award, up to three years of funding
Terms of reference: Fifteen awards are awarded nationally each year to outstanding students in the social sciences and humanities who are enrolled in their first or second year of a PhD program, or entering a doctoral program. Research must be in one of four themes of the foundation. Application through SFU. See www.trudeaufoundation.ca for full information.

Worksafe Research Training Awards
Value: $20,000, with a $2,500 research and travel allowance
Application deadline: March 12
Tenable: annual award
Terms of reference: For highly qualified graduate students at the master’s and doctoral level who are undertaking full-time research on the prevention and/or treatment of occupational illness, injury and disability. Enquiries to: resquery@worksafebc.com and www.worksafebc.com

Externally Administered Awards

The following awards are not administered by Simon Fraser University. The information is intended for general reference only; it may be subject to change. The student is responsible for enquiring and applying through the appropriate agency as indicated in the description.

In some instances, applications can be obtained from the Office of the Dean of Graduate Studies.

Awards Administered by the International Council for Canadian Studies
Value: varies
Application deadline: October
Terms of reference: The ICCS administers a number of national and international programs on behalf of Canadian and foreign donors. A brief description of some of the awards is given below. A comprehensive list of awards, including those offered for study abroad, is available from International Council for Canadian Studies, 800 – 325 Dalhousie Street, Ottawa, Ontario, K1N 7G2. Deadlines for application are normally in October of each year. Website: www.iccs-ciec.ca.

Commonwealth Scholarship Plan
Value: varies
Application deadline: October
Tenable: two years
Terms of reference: The Commonwealth Scholarship and Fellowship Plan offers awards to Canadian graduate students to study in Commonwealth countries to pursue advanced degrees. They are normally tenable for two years in any of the following countries: Malta, India, Jamaica, New Zealand, Nigeria, and the United Kingdom. Website: www.scholarships.gc.ca/csp

International Development Research Centre
Value: varies
Application deadline: unknown
Terms of reference: IDRC offers a number of awards to graduate students in Canadian universities to facilitate their involvement in Third World issues.
Eligibility: Canadian citizens or landed immigrants who have completed course work at graduate level and who have an affiliation with an institution in a developing country.
Value: Up to $20,000 per award. For full information about these awards, visit www.idrc.ca.

OMA Calgary Chapter (ASME) Graduate Scholarship
Value: $2,500
Terms of reference: Annual scholarship, ranging from $2,000 to $4,000 from the American Society for Offshore Mechanics & Arctic Engineering (ASME). For graduate students at Simon Fraser University, University of British Columbia, University of Victoria, University of Saskatchewan, University of Regina and University of Manitoba, with preference to applicants doing thesis work that applies to offshore mechanics, arctic or pipeline engineering.

Queen Elizabeth II British Columbia Centennial Scholarship
Value: $30,000
Application deadline: January 31
Tenable: Any term
Terms of reference: The purpose of this scholarship is to enable selected British Columbians who have graduated from a public university in BC to take further studies at approved universities in the British Commonwealth, except Canada. Eligibility: a graduate of the University of British Columbia, the University of Victoria, Simon Fraser University or the University of Northern British Columbia a) who has attended any British Columbia public university for a minimum of two years; b) whose ordinary domicile, home or residence is in BC; c) who is a Canadian citizen. Deadline: January 31. Applications are available on line.

Rhodes Scholarships
Value: $12,000
Application deadline: September 30
Terms of reference: The Rhodes Trustees offer annually in the Province of British Columbia one Rhodes Scholarship, which is tenable at Oxford University for two years, and renewable for a third year. Eligibility: Canadian citizens or British subjects who have been ordinarily resident in Canada for at least five years by October 1st in the year of application; from 19 to 25 years of age on October 1st in the year of election, with at least three years of university study completed at time of tenure. Distinction of character and intellect are given most consideration in selection. Further information and application forms are available from the Financial Aid and Awards office and the Office of the Dean of Graduate Studies.

Soroptimist Foundation of Canada
Value: $7,500
Application deadline: January 31
Tenable: summer term
Terms of reference: These are grants to assist female students with university studies which will qualify them for careers serving other women by improving the quality of their lives.
Eligibility: enrolled in a graduate program. Must be Canadian citizens or permanent residents. Website: www.soroptimistfoundation.ca

J.H. Stewart Reid Memorial Fellowship
Value: $5,000
Application deadline: April 30
Terms of reference: The J.H. Stewart Reid Memorial fellowship is open to doctoral students in any field at any Canadian university. Eligibility: a) Canadian citizen or landed immigrant; b) completion of at least one full academic year of graduate work by June 1; c) a first class academic record. Application forms are available on the web: steward.reid.ca

Carl H. Westcott Memorial Fellowship
Value: $10,000
Application deadline: December 1
Terms of reference: One scholarship is awarded annually to a student whose research work is being carried out at TRIUMF or on TRIUMF related projects. For further information visit: www.triumf.info/public/students/awards/westcott.php.

Bursaries and Loans

Bursaries Administered by the University

The following regulations govern all bursaries over which the University has jurisdiction. The deadline to apply for bursaries is approximately eight weeks before the start of the term.

Regulations

• Bursaries are a supplemental source of funding for students in high financial need. Students are expected to find their primary funding through other sources such as government student loan or grant programs, part time work, savings, family, etc.
• Students must have a demonstrated financial need.
• Students must have a minimum CGPA of 2.00 to be eligible for bursaries.
• Graduate students must be enrolled for residence credit in an approved full time program for the term of application. Students who do not enroll or subsequently change to on-leave or part time status may have their awards cancelled.
• The student must apply on the Simon Fraser University Bursary application form. It is the student's responsibility to meet applicable deadlines.
and supply all required documentation. Incomplete applications may be rejected.
• Unless otherwise stated, bursaries are tenable only at Simon Fraser University.
• Funds will be credited to the successful student’s account with the University. Outstanding debts to the University will be deducted from the bursary funds before a cheque for the credit balance is issued.
• Bursaries are tenable only for the term indicated on the notice and may not be deferred. Students who do not enroll in the term for which the bursary is granted forfeit the award. To be considered for bursaries in future terms of enrollment, students must reapply.

Bursaries for All Students

Alumni Scholarship and Bursary Endowment Fund
Program code: GEBO-584
Value: $500
Awarded: fall spring summer
Terms of reference: To undergraduate and graduate students. The awards are based on financial need and satisfactory academic standing.

Laura (Pat) Band and Richard W. Band Bursary for First Nations Students
Program code: GEBO-540
Value: $400
Awarded: fall spring summer
Terms of reference: The bursary is granted in any term based on financial need and community service to a student who is a member of the Squamish, Fort Langley, or Cheam First Nations and who have demonstrated volunteer involvement in service to the university or the community at large. The bursary may be granted to graduate or undergraduate students in all disciplines and fields of study. The successful student will have completed a minimum of 30 credit hours and will have achieved a minimum cumulative GPA of 2.33. The application should include a discussion of the student’s volunteer involvement in community activities and confirmation of the student’s status in the Squamish, Fort Langley or Cheam First Nations.

Birks Family Foundation Bursary
Program code: GPBO-551
Value: $500
Awarded: fall spring summer
Terms of reference: The Birks Family Foundation has established a plan of annual contributions to the Student Aid Fund of recognized Canadian universities and colleges for the creation of these bursaries. The bursaries are awarded by the Foundation on the recommendation of the University Scholarship Committee, are not restricted by faculty or year, and may be renewed. The number and amount of such awards may vary annually depending upon the funds available from the Foundation.

The Honourable Angelo E. Branca and Mrs. Branca Bursary
Program code: GEBO-586
Value: $500
Awarded: fall
Terms of reference: To students entering from secondary school. Applicants must demonstrate financial need and have satisfactory academic standing. Other bursaries valued approximately at one term’s tuition are available to students from any faculty, who have a minimum of 60 credit hours at Simon Fraser University, have maintained satisfactory academic standing, and are in financial need. In honour of the 50th wedding anniversary of the Honourable Angelo E. Branca and Mrs. Branca, and on the occasion of his retirement from the bench, this bursary endowment fund has been established by the following donors, Confratellanza Italo-Canadese and friends. Mr. J. Diamond, Mr. J. Segal, Mr. Ben Wosk.

Burrard Charitable Foundation Bursary
Program code: GPBO-554
Value: $750
Awarded: fall
Terms of reference: To a student with any physical disability. Adjudication will occur in consultation with the Physically Challenged Students’ Co-ordinator.

Father Della-Torre Bursary
Program code: GEBO-592
Value: $700
Awarded: fall
Terms of reference: Bursaries valued approximately at one term’s tuition are available to students entering from Secondary School. Applicants must demonstrate financial need and have satisfactory academic standing.

Other bursaries valued approximately at one term’s tuition are available to students in any faculty, who have a minimum of 60 credit hours at Simon Fraser University, have maintained satisfactory academic standing and are in financial need. A Bursary Endowment Fund has been established in honor of Father Della-Torre for his 27 years of pastorate at the Sacred Heart Church, Vancouver. This fund will provide annual bursaries in perpetuity from the earned income.

Alex W. Fisher Bursary
Program code: GEBO-598
Value: $500
Awarded: spring
Terms of reference: To a hard-working and deserving male student in need of financial assistance. Donated by Alex W. Fisher.

Lois M. Fisher Bursary
Program code: GEBO-597
Value: $500
Awarded: spring
Terms of reference: To a hard-working and deserving female student in need of financial assistance. Donated by Alex W. Fisher.

Graduate Emergency Bursaries
Program code: GUBO-401
Value: $100
Awarded: fall spring summer
Terms of reference: Bursaries are available to graduate students who have critical financial need.

Hamber Foundation Bursary
Program code: GUBO-559
Value: $1000
Awarded: fall
Terms of reference: To women students with satisfactory academic standing and need for financial assistance.

Blayne and Sharon Johnson Bursary
Program code: GEBO-523
Value: $1100
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance.

Charles Chan Kent Golden Wedding Bursaries
Program code: GPBO-563
Value: $500
Awarded: fall
Terms of reference: To a student who is proceeding to a degree in any field, has successfully completed at least one year at Simon Fraser University, and needs financial assistance. Preferably the bursary will be made to a student of Chinese descent.

Dr. Carol Matusicky Family Studies Bursary
Program code: GEBO-708
Value: $450
Awarded: spring
Terms of reference: The bursary is given on the basis of demonstrated financial need and satisfactory academic performance. Preference will be given to a student in the Certificate in Family Studies program or, failing that, to a student in any faculty whose course work will prepare them to work with children, youth and families after university.

Master of Urban Studies Bursary
Value: $600
Awarded: fall spring summer
Terms of reference: Bursaries are available for full-time students in the Master of Urban Studies program who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support unavailable from a sponsoring organization, current income or assets.

Jo-An Mychaluk Bursary
Program code: GEBO-602
Value: $750
Awarded: fall
Terms of reference: To students with satisfactory academic standing. These bursaries are available to students who are or have been residents of the Chilcotin or Cariboo regions of BC. This fund has been established in memory of Jo-An Mychaluk who worked in the Centre for Distance Education.

Madeleine Nelson/Megan Thomas Bursary
Program code: GEBO-735
Value: $300
Awarded: spring
Terms of reference: Granted to graduate or undergraduate students based on demonstrated financial need and satisfactory academic performance. Preference will be given to mature female students beginning or returning to University.

Nikitman/Chan Bursary
Program code: GEBO-737
Value: $1000
Awarded: fall spring summer
Terms of reference: The bursary will substantially pay tuition and fees for two terms and will be disbursed over two terms. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in any faculty or discipline. The recipient will be a single parent with preference given to entering students.

Opsimath Club Bursary
Program code: GEBO-603
Value: $500
Awarded: fall
Terms of reference: For mature, continuing students at Simon Fraser University, who have financial need and good academic standing. The Opsimath Club is an organization of senior (60 years) students.

Office of the Registrar Bursary for Physically Challenged Students
Program code: GEBO-665
Value: $750
Awarded: fall
Terms of reference: To physically challenged undergraduate or graduate students in any faculty. The bursaries will be granted to physically challenged students holding satisfactory academic records and who are experiencing financial need in the pursuit of studies.

William and Jane Saywell Bursary
Program code: GPBO-682
Value: $1500
Awarded: fall
Terms of reference: To a student who is a single parent and who has demonstrated a deep commitment to any field of study at Simon Fraser University and has financial need. A letter that outlines and discusses their extracurricular activities and interests that would demonstrate commitment to the chosen field of study must be included.
Mrs. Rosalie Segal Endowment Fund for Students With Special Needs  
Program code: GEBO-604  
Value: $500  
Awarded: fall/spring  
Terms of reference: This fund has been established to provide bursaries to physically challenged students. Up to 3 bursaries will be awarded on the basis of financial need. Application will be made in consultation with the Physically Challenged Students’ Co-ordinator.

Simon Fraser University Daycare Bursaries  
Program code: GUBO-700  
Value: $100  
Awarded: fall/spring summer  
Terms of reference: Applications for daycare bursaries are available at the Daycare Centre. Eligible students may qualify for a bursary provided that financial need can be demonstrated by a completed Canada Student Loan assessment or an Open Bursary assessment. Daycare bursaries are available to both graduate and undergraduate students.

Simon Fraser University Disabled Graduate Student Award  
Program code: GUBO-850  
Value: $2000  
Awarded: fall/spring  
Terms of reference: An award of $2,000 per term for one year may be made by the University to a disabled graduate student. The applicant must be a full time enrolled graduate student in good standing whose disability substantially increases the cost of study and who can demonstrate financial need.

SFU International Students’ Bursary Fund  
Program code: GUBO-600  
Value: $500  
Awarded: fall/spring summer  
Terms of reference: This fund has been established to assist international students who have critical financial need. Students applying for this bursary must be enrolled in a minimum of 9 credit hours and have satisfactory academic standing.

Simon Fraser University Open Bursaries  
Program code: GUBO-500  
Value: $500  
Awarded: fall/spring summer  
Terms of reference: Must be enrolled in a minimum of 9 credit hours and have satisfactory academic standing.

Jennifer Allen Simons Bursary  
Program code: GEBO-869  
Value: $1000  
Awarded: fall spring  
Terms of reference: To an undergraduate or graduate woman student in any faculty. The bursary will be granted to a student who is a single parent supporting a child, and who is in financial need and who has satisfactory academic performance. Applicants must have completed one term at Simon Fraser University as a full-time student.

Harry and Dora Annie SMEE Bursary  
Program code: GEBO-800  
Value: $800  
Awarded: fall  
Terms of reference: Up to 3 bursaries will be awarded to students in any faculty who have completed at least 30 credit hours at Simon Fraser University. The awards will be based on financial need and satisfactory academic standing. Preference will be given to female students.

Merle L. Smith Bursary  
Program code: GPBO-572  
Value: $525  
Awarded: fall spring  
Terms of reference: A physically challenged student in any faculty who is beyond first year studies. Initial preference will be given to wheelchair users.

Squamish Nation Bursary  
Program code: GEBO-738  
Value: $500  
Awarded: fall/spring summer  
Terms of reference: The bursary, based on financial need and community service, is granted to a student who is a member of the Squamish Nation. The bursary may be granted to graduate or undergraduate students in all disciplines. The successful student will have completed a minimum of 24 credit hours and will have achieved a minimum CGPA of 2.00. The application should include a discussion of the student’s involvement in SFU or Squamish Nation community activities and confirmation of the student’s status with the Squamish Nation.

TSSU Member Child Care Bursary  
Program code: GUBO-550  
Awarded: fall/spring summer  
Terms of reference: TSSU employees are eligible to apply to the TSSU Member Child Care Bursary for each term in which they hold an appointment and are enrolled as students at SFU and in which they receive child care services from a paid child care provider. All applications are subject to verification. The applicant must identify him/herself as an employee in the bargaining unit on the bursary application.

University Women’s Club of Vancouver Bursary  
Program code: GPBO-575  
Value: $985  
Awarded: fall/spring  
Terms of reference: To a female student in any faculty enrolled in any program of study leading to a degree. The basis of the award is demonstration of financial need and satisfactory academic standing.

Vancouver Foundation First Nations Bursary  
Program code: GPBO-697  
Value: $500  
Awarded: fall  
Terms of reference: Bursaries will be available annually in the fall term to undergraduate or graduate Aboriginal students (First Nations, status or non-status, Metis or Inuit) who permanently reside in British Columbia. Awards will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Western Businesswomen’s Association Bursary  
Program code: GEBO-705  
Value: $800  
Awarded: fall  
Terms of reference: To a full or part-time student who is either entering the University for the first time or returning after an absence. Preference will be given to a mature female student. The bursary will be based on satisfactory academic performance and demonstrated financial need.

Bursaries for Applied Sciences Students  
Delcan Corporation Bursaries  
Program code: GPBO-667  
Value: $1000  
Awarded: spring  
Terms of reference: To undergraduate and graduate students enrolled full time in the faculties of Science or Applied Sciences. It is the intention of the Delcan Corporation to promote socio-environmental research and studies relative to major civil engineering projects; to support opportunities for women to enter careers at the management level in engineering; to increase high technological input into civil engineering, and to promote superior writing skills. Students will apply for these bursaries through Financial Assistance, and must include a letter of recommendation from the Office of the Dean of the major program.

Olga and Richard Murray Bursary in Applied Sciences  
Program code: GEBO-725  
Value: $1000  
Awarded: fall/spring summer  
Terms of reference: Granted to graduate or undergraduate students in the Applied Sciences Faculty on the basis of demonstrated financial need and satisfactory academic performance. To the extent feasible, preference will be given to a student, or the spouse or child of a person, who is a member of the Telecommunication Workers Union or of Van-Tel Credit Union.

Dr. Tom Richardson Memorial Graduate Entrance Bursary  
Program code: GEBO-726  
Value: $1400  
Awarded: fall spring  
Terms of reference: To a graduate student entering Kinesiology or in the first term of Kinesiology or for a student pursuing graduate studies in other Departments with a focus on biomedical engineering. The criteria for this award are: financial need; demonstrated academic excellence at the undergraduate level and applicable, at the graduate level; intention to enroll in the graduate program in Kinesiology or completion of the first term in a graduate program in Kinesiology or intention to pursue research in biomedical engineering as a graduate student in another department.

Vancouver Foundation Health Science Bursaries  
Program code: GPBO-578  
Value: $500  
Awarded: fall/spring  
Terms of reference: The bursary assistance program is limited to full-time students studying in Health Sciences. The funds are directed to students who have completed at least two years of post-secondary education and can demonstrate financial need. Areas of study include any of the following: Pre-Med program, Kinesiology, Biomedical Engineering, and Gerontology.

Bursaries for Arts and Social Sciences Students  
Adaline May Clark Bursary  
Program code: GEBO-589  
Value: $400  
Awarded: fall  
Terms of reference: The late Mrs. Clark has provided for the endowment of funds, for bursaries to enable students to attend, or continue to attend university. Students must be enrolled in the School for the Contemporary Arts, and must demonstrate financial need and a high level of achievement in the Arts.

Charles Drogan & Rose Anne Doonan Bursary in Labour History  
Program code: GEBO-542  
Value: $250  
Awarded: fall/spring summer  
Terms of reference: The bursary will be granted to a graduate or undergraduate student pursuing research in Labour History in the Faculty of Arts. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

Aird Sundas Flavelle Memorial Bursary  
Program code: GEBO-659  
Value: $1200  
Awarded: fall  
Terms of reference: To a student who has completed at least 15 hours at Simon Fraser with a satisfactory academic standing and whose course of study is in the following areas: political science, economics and/or business administration.
Ancie and Arthur Fouks Bursary in Publishing Studies
Program code: GEBO-526
Value: $1000
Awarded: fall
terms of reference: One or more bursaries will be awarded annually in the fall term to a student enrolled in a degree program in Publishing Studies. Awards may also be given to graduate students undertaking a Master Program in Publishing Studies. Student must have a minimum of 85 credit hours. The successful applicant should have financial need, a satisfactory academic standing and a demonstrable intent to pursue a career in the publishing industry. Applicants must submit to the Publishing Studies Program Committee a resume, including education and work history, and at least one short sample of professional, academic or business writing or portfolio piece to be considered for the award.

Keith Gilbert Loughlin Bursary in Gerontology
Program code: GEBO-702
Value: $700
Awarded: fall
Terms of reference: To a graduate student enrolled in the Masters of Gerontology program, or to an undergraduate student enrolled in the Gerontology program, a Post Baccaulareate Diploma Program. The bursary will be granted to a student demonstrating financial need and in satisfactory academic standing. Preference will be given to a student specializing in quality of life issues in intermediate care facilities for seniors. Applicants should submit with their application, a letter outlining specialization or area of interest in the Gerontology field. A departmental nomination is to be submitted along with the application form.

MATCH International Centre Bursaries in Honour of Rosemary Brown
Program code: GPBO-607
Value: $625
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to full-time undergraduate or graduate students in the Department of Women’s Studies.

Dr. Grazia Merler Bursary in French
Program code: GEBO-714
Value: $500
Awarded: spring
Terms of reference: To a student in French on the basis of demonstrated financial need and satisfactory academic performance.

Master’s of Public Policy Program Bursary
Program code: GPBO-702
Value: $500
Awarded: fall
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to students who are approved in the Master’s of Public Policy degree program.

Master in Publishing Bursary
Program code: GUBO-107
Value: $500
Awarded: fall
Terms of reference: Bursaries are available for full and part-time students of Master of Publishing program and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets.

L. R. (Bunny) Wright Memorial Bursary
Program code: GEBO-537
Value: $300
Awarded: fall
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance, to a student(s) of the Graduate Liberal Studies program.

Bursaries for Business Administration Students
Faculty of Business Administration Alumni Bursaries
Program code: GEBO-531
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Business Administration.

Executive Master of Business Administration Bursary
Program code: GUBO-101
Value: $250
Awarded: fall
Terms of reference: Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Students must submit a letter outlining their special circumstances with the bursary application. Awards will be made by the Senate Undergraduate Awards Adjudication Committee in consultation with the student’s department.

Hildegard and Cornelius Renner Graduate Bursaries
Program code: GEBO-533
Value: $500
Awarded: summer
Terms of reference: Bursaries will be awarded each term to students of the Executive Master of Business Administration and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Students must submit a letter outlining their special circumstances with the bursary application.

Aird Dundas Flavelle Memorial Bursary
Program code: GEBO-659
Value: $1200
Awarded: fall
Terms of reference: To a student who has completed at least 15 hours at Simon Fraser with a satisfactory academic standing and whose course of study is in the following areas: political science, economics and/or business administration.

Global Asset and Wealth Management MBA Bursary
Program code: GPBO-894
Value: $250
Awarded: fall
Terms of reference: Bursaries are available for students within the Graduate Diploma in Business Administration and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Students must submit a letter outlining their special circumstances with the bursary application. Awards will be made by the Senate Undergraduate Awards Adjudication Committee in consultation with the student’s department.

Global Asset and Wealth Management MBA Bursary
Program code: GUBO-103
Value: $250
Awarded: fall
Terms of reference: The bursary was established in 2004 by the Business Council of Global Asset and Wealth Management MBA Program. The bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Global Asset and Wealth Management Master of Business Administration Program.

Graduate Diploma in Business Administration Bursary
Program code: GUBO-102
Value: $250
Awarded: fall
Terms of reference: Bursaries are available for students of the Management of Technology Master of Business Administration and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Students must submit a letter outlining their special circumstances with the bursary application. Awards will be made by the Senate Undergraduate Awards Adjudication Committee in consultation with the student’s department.

Specialist Masters of Business Administration Bursary
Program code: GUBO-100
Value: $250
Awarded: fall
Terms of reference: Bursaries are available for students of the Specialist Master of Business Administration and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Students must submit a letter outlining their special circumstances with the bursary application. Awards will be made by the Senate Undergraduate Awards Adjudication Committee in consultation with the student’s department.

Bursaries for Education Students
BC Exchange Teachers’ Association Bursary
Program code: GPBO-594
Value: $300
Awarded: summer
Terms of reference: Granted to undergraduate or graduate students in the Faculty of Education, in any term based on demonstrated financial need and satisfactory academic performance.

University Women’s Club of Vancouver/ Jean Beaty Memorial Bursary in Education
Program code: GEBO-519
Value: $700
Awarded: summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to a mature student in the Faculty of Education.

Faculty of Education Alumni Bursaries
Program code: GEBO-533
Value: $500
Awarded: summer
Terms of reference: Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to students in the Faculty of Education.

Master In Education (Off Campus) & Education Doctorate Program Bursary
Program code: GUBO-105
Value: $500
Awarded: fall
Terms of reference: Bursaries are available for full and part-time students of the Master of Education (off campus) and Education Doctorate program and who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets.

Hildegard and Cornelius Renner Graduate Bursary in Education
Program code: GUBO-517
Value: $800
Awarded: fall
Terms of reference: Awarded annually in any term on the basis of demonstrated financial need and
satisfactory academic performance to mature graduate students in the Faculty of Education. Preference will be given to mature graduate students with an interest in adult education. Application should include a discussion of the student applicant’s interest in adult education.

### Bursaries for Health Sciences Students

**Health Sciences Graduate Bursary Program**

Program code: GUSO-109
Value: variable

- **Awarded:** fall, spring, summer

Bursaries are available for full-time graduate students registered in programs in the Faculty of Health Sciences who have demonstrated financial need. Bursaries will be awarded each term to students in good academic standing who have special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Awards will be made by the Senate Undergraduate Awards Adjudication Committee.

**TD Bank Financial Group Graduate Bursary Endowment for Health Sciences**

Program code: GEB0-739
Value: $500

- **Awarded:** fall spring summer

Terms of reference: Bursaries will be granted to graduate students in the Faculty of Health Sciences. The bursary is granted on the basis of demonstrated financial need and satisfactory academic progress.

### Bursaries for Science Students

**Curzon-Digman Bursary**

Program code: GEB0-594
Value: $750

- **Awarded:** fall spring summer

Terms of reference: Available to graduate students in physics or for majors or honours students in physics, mathematical physics, chemical physics, biophysics or other joint programs with physics. These bursaries are subject to financial need and academic ability. Nominations will be made by the Chair of the Physics Department in consultation with financial assistance.

**Delcan Corporation Bursaries**

Program code: GPBO-687
Value: $1000

- **Awarded:** fall spring

Terms of reference: To undergraduate and graduate students enrolled full time in the faculties of Science or Applied Sciences. It is the intention of the Delcan Corporation to promote socio-environmental research and studies relating to major civil engineering projects to support opportunities for women to enter careers at the management level in engineering; to increase high technological input into civil engineering, and to promote superior written and oral communication skills. Students will apply for these bursaries through Financial Assistance, and must include a letter of recommendation from the Office of the Dean of the major program.

**Urea Formaldehyde Foam Insulation Action Association Bursary**

Program code: GEB0-807
Value: $250

- **Awarded:** fall spring

Terms of reference: To students who have completed at least 60 credit hours and who are studying in the areas of toxic chemicals or pollutants and their effects on human health and functioning. Please document special circumstances requiring financial support not available from a sponsoring organization, current income or assets. Awards will be made by the Senate Undergraduate Awards Adjudication Committee.

### University Administered Loans

**Student Emergency Loan Fund Regulations**

These regulations govern all loans for continuing students over which the University has jurisdiction.

- Short term emergency funds are available to students who urgently need money while awaiting other sources of funding.
- Emergency loans are interest free for 60 days.
- Students must have a demonstrated financial need and source of repayment.
- Undergraduate students must be enrolled in a minimum of nine credit hours of normal graded courses in the term of application. Challenge, audit, and credit free courses will not be considered.
- Graduate students must be enrolled for residence credit in an approved full-time program.
- Students must apply on the SFU Emergency Loan application form and be interviewed by a Financial Assistance advisor. It is the student’s responsibility to supply all requested documentation. Incomplete applications may be rejected.
- SFU Emergency Loans are tenable only at Simon Fraser University and only for the term indicated on the notice.

**Work-Study Program**

The Simon Fraser University Work-Study program provides part-time on-campus jobs for full-time students. To participate in this program, students must have a minimum CGPA of 2.0, and be a enrolled full time student (minimum of 9.0 credit hours for undergraduate students, or be enrolled as a full time graduate student). Funding is limited and selection is based on the student’s level of need. Apply to Financial Aid and Awards approximately six weeks prior to the start of the term. Application forms are available at Financial Aid and Awards in MBC 3200 and on our website at www.studentaid.sfu.ca/financialaid.

**Government Administered Programs**

### Canadian Armed Forces Subsidization Plans

**Admission Requirements**

An applicant must be a Canadian citizen; be physically fit for enrolment in the Canadian Forces; and be at least 16 years of age on the first day of January of the year the student commences first year studies at university.

**How to Apply**

Individuals interested in obtaining more information on, or wishing to make application for, any of these plans are requested to contact: Commanding Officer, Canadian Forces Recruiting Centre, 757 West Hastings Street, Vancouver, BC, V6C 1A1.

### Government Loans

A loan is a sum of money borrowed by a student who proves financial need on a promise to repay at some specified time.

### Canada Student Loan/BC Student Loan

The purpose of the Canada Student Loan/BC Student Loan Program is to assist students whose resources are insufficient to provide the cost of full time studies at the post-secondary level of education. Therefore, funds under the program are granted only where the financial resources available to students from parents, summer or other employment, part time work, or other sources, are insufficient to meet their estimated educational costs. Normally, the funds provided under this program will be disbursed through a combination of the Canada Student Loan and BC Student Loan. For details, see the Student Aid BC website at www.studentaidbc.ca.

### Eligibility

Applicants must be Canadian citizens or permanent residents (landed immigrants) to be eligible. Assistance will be provided to eligible enrolled full time undergraduate students taking a minimum of 60% or nine regular credit hours (40% or six students with permanent disabilities) of a full program of study leading to a certificate, diploma or undergraduate degree, or enrolled full time (part time for students with permanent disabilities) graduate students. The amount of assistance awarded will be based on assessed need as determined by the provincial authority. See www.studentaidbc.ca for details.

**How to Apply**

For details about how to apply for a student loan and to receive funding for which you are eligible, please see www.studentaidbc.ca.

Students are advised to keep in constant touch with the bank, or service providers from which they secure loans. To maintain interest-free loan status and stay eligible for future funding, students should be aware of their responsibilities as described in the Maintain Your Loan section of the www.studentaidbc.ca website.

For appeals, reassessments or other concerns, please contact Financial Aid and Awards.

### Government Loans

**Exceptions**

Although the majority of programs at Simon Fraser University are eligible for government student loans, some programs do not meet StudentAidBC eligibility criteria (e.g. Executive MBA, MED Off-campus). Please contact Financial Aid and Awards if you do not see your program listed on the Program Information section of the www.StudentAidBC.ca website.

**Canada Access Grant – Students from Low income Families**

The Canada Access Grant – Students from Low income Families is a non-repayable grant for first-time, first-year students entering Post-Secondary Education. It is designed to provide an incentive to students from low-income families to participate in Post-Secondary Education by reducing financial barriers and by offsetting debt (the grant replaces federal student loan with grant).

**Loan Reduction**

The BC Loan Reduction Program is being delivered in co-operation with the Canada Millennium Scholarship Program Information
Government Part-time Grants/Loans
If you are a part time student with demonstrated financial need, you may qualify for a federal study grant of up to $1,200 (Canada Study Grant for High Need Part-Time Students). Grants are targeted to students with dependants and possibly other students with special circumstances who are not able to take full time studies.

Federal student loans up to $4,000 are also available to part time students with financial need. These loans supplement other financial resources such as earnings, scholarships and bursaries.

Part time students who are Canadian citizens or landed immigrants and who are not in default of previous federal student loans or grants may apply for both the grant and loan programs.

Applications and information are available from www.StudentAidBC.ca. The deadline for applications is nine weeks before the end of each term.

Grants for Students with Permanent Disabilities
Federal grant programs are available to students with permanent disabilities. The Canada Study Grant for the Accommodation of Students with Permanent Disabilities is designed to offset exceptional education-related costs incurred for services and equipment, such as note-takers, interpreters, and technical aids. Up to $8,000 per program year is available. Check with the Centre for Students with Disabilities in MBC 1250, or call 778.782.3112.

The Canada Access Grant – Students with a Permanent Disability (CAG-PD) is intended to provide up to $2,000 in grant to students with a documented permanent disability. The CAG-PD is intended to assist in covering the costs of accommodation, tuition, books, and other education-related expenses, for up to $2,000 per year.

For eligible students, the $2,000 will be applied before any other funding to reduce the assessed need for full-time students. For part-time students, the grant will be awarded before part-time loans. Contact Financial Aid and Awards in MBC 3200 or call 778.782.4356 for further information.

Grants for Female Doctoral Students
A federal grant program is available to female doctoral students in specific doctoral programs. Please call 778.782.4356 for further information, or see www.StudentAidBC.ca

The Loan Remission Program
If you have a BC Student Loan negotiated prior to August 1, 2000 (Guaranteed or Risk Sharing), the Loan Remission Program may assist in the reduction of your BC Student Loan debt.

If you have a BC Student Loan negotiated after August 1, 2000 (Direct Lend), this loan may be included when calculating your total debt, but will not be eligible for loan remission.

You will not be eligible for consideration under the Loan Remission Program if you have Direct Lend BC Student Loans only. For further information and eligibility on the Loan Remission Program, contact: Loan Remission and Management Unit, StudentAidBC, Ministry of Advanced Education or visit the StudentAid BC website at www.StudentAidBC.ca (debt management tools).

Study in BC for Students from Other Provinces
Out-of-province Student Loans
Students must apply to their province of residence for Canada and Provincial/Territorial funding. Application forms are available from Financial Aid and Awards, MBC 3200. On-line applications are available for most provinces. Check the Financial Aid and Awards website at http://students.sfu.ca/financialaid for links to each of the provincial/territorial ministries.

International Students
United States Students
Citizens (or eligible non-citizens) of the United States attending the university may apply for funding through the US Department of Education Student Financial Assistance Program. A Free Application for Federal Student Aid (FAFSA) must be completed by the student and submitted to the Federal Student Aid Programs. SFU’s school code is 008444. A Student Aid Report (SAR) is then issued to the student. SFU does not receive the SAR electronically because we are a foreign school. You will need to contact FAFSA to request an original eight page SAR.

To apply for Stafford Loans, the student must submit the signed SAR to Financial Aid and Awards, with a master promissory note and school certification form, obtained from a state guarantee agency. New, first time borrowers must also complete an entrance interview at www.mapping-your-future.org.

Financial Aid and Awards calculates the student’s costs, completes the school certification form, and then forwards the application to the appropriate agency for processing.

For more information regarding financial aid from the US Department of Education, call:1.800.4.FED.AID (1.800.433.3243), or http://studentaid.ed.gov

Students with permanent resident status may be eligible to apply for Canada Student Loans. See section International Students.

Students from Other Countries
Students who are not Canadian citizens or Permanent Residents, and who will require financial assistance to attend Simon Fraser University must arrange such assistance in their country of origin before arrival in Canada.

Simon Fraser University permits non-Canadian students to compete for scholarships once they have enrolled at the University on the basis of course work undertaken at Simon Fraser University. Bursaries are awarded on the basis of financial need, but only as supplemental funding, not as core funding needed to meet immigration requirements. Students are expected to exhaust all other sources of funding including government aid from their home country before being eligible for bursaries. See the bursary section for details.

It must be stressed that non-Canadian students should not predicate their tuition and living expense estimates upon these sources. Non-Canadian students are normally not permitted to work in Canada. Such students are expected and required by federal law to have sufficient funds guaranteed for their education prior to arrival in Canada.

For More Information
For further information on programs offered by Financial Aid and Awards (Student Services) see students.sfu.ca/financialaid.
Individual Special Arrangements

(See “1.3.5 Admission Under Special Arrangements” on page 244.)

Individual students may apply by December 1st to the dean of graduate studies for admission to an individual special arrangements program. Applicants should request an application package from the dean of graduate studies office at least three months prior to the deadline.

In addition to regularly scheduled courses in established graduate programs, the following courses are open to special arrangements students.

**SAR 891-3 Special Topics**
To be selected by the student and supervisory committee.

**SAR 892-3 Special Topics**
To be selected by the student and supervisory committee.

**SAR 893-4 Special Topics**
To be selected by the student and supervisory committee.

**SAR 894-5 Special Topics**
To be selected by the student and supervisory committee.

**SAR 895-3 Special Topics**
To be selected by the student and supervisory committee.

**SAR 896-6 Special Topics**
To be selected by the student and supervisory committee.

**SAR 897-5 Special Topics**
To be selected by the student and the supervisory committee.

**SAR 898-6 Master’s Thesis**

**SAR 899-6 PhD Thesis**

**Cohort Special Arrangements**

(See “1.3.5.a Cohort Special Arrangements” on page 244.)

These programs are designed to meet the needs of specific groups of students pursuing a master’s degree in a field that is not covered in existing programs. Programs are advertised when available.

**Digital Media Program**

Simon Fraser University, University of British Columbia, Emily Carr Institute of Art and Design and the British Columbia Institute of Technology collaborate on the Master of Digital Media degree, a full time professional graduate program offering team-based learning in close collaboration with the digital games and media industries. The program is offered at the Great Northern Way campus. For further information visit http://www.gnwc.ca/mdm

**Certificate Programs**

(See “1.3.13 Certificate Programs” on page 245.)

Graduate certificate programs are combinations of courses taken while a student is pursuing a master’s or doctoral degree program. Certificate programs are listed below.

**Graduate Certificate in Development Studies**

Development Studies is the study of social transformation or change, particularly those changes that affect the quality of life of individuals and groups. The problems of social transformation are urgent and complex, and often they transcend the boundaries of conventional academic disciplines. Development Studies examines the problems in, processes involved, and the prospects for the transformation of human, natural, and material resources in various contexts and at various levels of social interaction, from the local, national, and regional to the international/global level.

To study development as social transformation, one must draw upon many disciplines in order to obtain a balanced understanding of historical and contemporary processes. These disciplines include, but are not limited to: anthropology, business, communication, economics, education, geography, history, law, political science, psychology, resource and environmental management, and sociology.

This graduate certificate in development studies links faculty teaching and research across nine units in the university, and enables students to coordinate their graduate studies so as to concentrate on development issues, using a multidisciplinary approach. Students move through their programs in their departments while also being in regular contact with those with common interests in development across the university.

**Program Requirements**

- Students will be admitted to the university and graduate from their home units according to departmental, school and faculty regulations.
- Students enrolled in listed certificate courses are expected to meet all course requirements. Students will be advised of the scheduling of courses (listed in the certificate) early so as to enable them to plan their programs in consultation with their supervisory committees.
- The list of courses to be taught in the next terms will be published well in advance. Students are advised to plan course sequences and choices leading toward the certificate well ahead. Completing the certificate may require students to take more courses than their degree requires and may thus prolong the time to completion of their graduate studies.
- Students will graduate with a regular graduate degree offered by their home units, plus a certificate that recognizes their concentration in the field of development studies.

**Admission Requirements**

On being granted regular admission to a graduate program in any department, school, or faculty in the University (including Special Arrangements), students will be informed about the Certificate by the steering committee. Though working on projects, theses, and essays is not a requirement of the certificate, students who elect to complete projects, theses, essays in the unit of admission (known as the home department) in a development-related subject will be encouraged to participate.

**Continuation Requirements**

Maintaining satisfactory progress as a graduate student in the University. Students will be informed of their progress toward the certificate.

**Graduation Requirements**

Students will complete four courses selected from the list of courses approved by the steering committee of the program, including a Core Seminar course on development. Students seeking the certificate must take listed courses from at least two different departments or schools (or non-departmentalized faculties). Any student can complete the certificate with the right combination of courses, including the Core Seminar. Students are advised to take the Core Seminar course in the first half of their graduate studies.

**Required Courses**

The Core Seminar course is currently CMNS 857-5. A list of courses eligible for inclusion in the Certificate will be published annually.

**Visiting Research Student**

Simon Fraser University accepts visiting research students under the terms of the Canadian Graduate Student Research Mobility Agreement. For details, see the Graduate Studies website at www.sfu.ca/dean-gradstudies. Students attending Simon Fraser University under this agreement must enroll every term for the course GRAD 800.

**GRAD 800-0 Visiting Research Student**

All students who are attending Simon Fraser University under the terms of the Canadian Graduate Student Research Mobility Agreement must enroll for GRAD 800.
Graduate Diploma Offered
Graduate Diploma in Quantitative Methods in Fisheries Management

Graduate Degrees Offered
Master of Applied Science
Master of Applied Science (Information Technology)
Master of Applied Science (Interactive Arts)
Master of Arts
Master of Engineering
Master Resource Management
Master of Resource Management (Planning)
Master of Science
Doctor of Philosophy

General Regulations
For admission requirements, enrollment, residence requirements and time limit for completion of degrees, see “Graduate General Regulations” on page 243.

School of Communication
K9673 Shrum Science Centre, 778.782.3595 Tel, 778.782.4024 Fax, www.sfu.ca/communication

Graduate Program Chair
G. McCarron BA (S Fraser), MA, PhD (York, Can)

Faculty and Areas of Research
For a complete list of faculty, see “School of Communication” on page 109.

P.S. Anderson – telecommunication and broadcasting policy; communication technology; communication to mitigate disasters/emergency communications
R.S. Anderson – international development; communication in conflict and intervention; community economic development
E. Balka – politics, design, implementation and use of health information technologies; women and information technologies; technology assessment; participatory design of technology; information technology and work; technology and social movements; technology and occupational health
A.C.M. Beale – communication theory and technology issues; film and video; cultural policy; feminist analyses
P. Chow-White – new media and technology; race; culture; information society; genomics
Z. Druck – documentary film; film history and theory; technology and popular culture; narrative, semiotic and aesthetic theory; critical social and cultural theory
A.L. Feenberg – critical theory of technology; technology studies; Marcuse and the Frankfurt School; Heidegger; online community; online education; software development for online discussion forums
R.S. Gruneau – popular culture and media; communications and cultural theory
S. Gunster – advertising and consumer culture; critical cultural theory, especially Walter Benjamin and the Frankfurt School; contemporary social and political theory; cultural studies; politics and ideology; culture, commodification and everyday life; cultural politics of investment and the new economy; utopian themes in media and popular culture
D. Gutstein – Internet, information policy; online news; commodification of information, public access; news media analysis; health in the media; propaganda studies
R.A. Hackett – political communication; journalism and media studies; news and ideologies; media and social movements
L.M. Harasim – computer mediated communication and collaboration; telelearning and telework; social network design and evaluation
P.M. Howard – communication in the computerized workplace; technology transfer; knowledge systems in development; risk communication with a focus on biotechnologies
D.Y. Jin – political economy of culture and media; telecom policy and industry; globalization; Asia media and culture; new media
S. Kline – advertising; children’s media and culture; audience research; public communication campaigns; non-broadcast video designs and uses
M. Laba – media analysis; popular culture; social issues communication; social advertising
B.S. Lewis – film and video studies, comparative broadcast and film policy
R.M. Lorimer – publishing; mass communication
J. Marontate – technology and culture; art worlds; science studies; innovation; cultural heritage; interdisciplinary networks and critical theory
K. McAllister – cultural memory and historical persecution; colonial discourses and racial identity; photographic images, artifacts, archives, multi-media installations and memorials; technology and the body; surveillance technology, dystopic narratives, dataveillance and asylum seekers
G. McCarron – history and theory of communication; privacy and technology; film studies; advertising; interpersonal communication
D.C. Murphy – media production; documentary and advocacy video production; sound design; video post-production processes (motion graphics, composting, keying and aesthetic design); media production as a pedagogical process; social implications of media; Educational design: interactive pedagogical media, web-based interfaces; media production facility design
C.A. Murray – strategic marketing, policy and regulation in telecommunications and broadcasting; political communication and opinion research; social marketing
R. Onufrijchuk – communication design for media: technology and occupational health; critical theory; communication; development and democracy in transitional societies; media and information industries in China

Adjunct Faculty
S. Brahman – communications/computing systems, planetary explorations, space communications
N. Duxbury – Canadian communication and cultural industries and policy-making
J.A.D. Holbrook – science and technology and regional innovations systems
M.S. Lipsett – science and technology research, technology transfer, management of technology and innovation, international co-operation
D. Stirling – communication and conflict, resolution in various workplaces

Communication is a comparatively new discipline that builds on traditional social science disciplines. It focuses on analysis of the context and means in which information in its diverse forms is created, packaged, circulated, interpreted, and controlled. As an applied science, communication is important in the creation and critical evaluation of legal and public policies in broadcasting, telecommunications, and community and international development. The study of communication has also become prominent in the professions, notably in law, education, community medicine, counselling, and mental health, and in business administration, and broadcasting.

The school draws on a variety of perspectives, but it is most readily distinguished by the fact that it treats communication as a humanistic social science with both theoretical and applied dimensions. Students explore communication theory and practice and are encouraged to apply research and theory to issues and problems in contemporary societies and cultures.

The school offers graduate programs leading to an MA degree or PhD degree.

Fields of Study and Research
Faculty resources provide for graduate studies in the following general areas of interest. Students may wish to specialize in one or more of these general areas, or to select related aspects from two or more.

• theoretical foundations in communication studies
• communication in history
• broadcasting and telecommunication regulation, policy and practice
• communication, development and environment
• the information society/economy
• computer mediated networks and virtual environments
• publishing
• international communication, inter-cultural communication
• science and technology policy, technology-transfer, communication of science
• media and cultural studies
• cultural policy and cultural politics
• acoustic environments and communication
• management of technology
• telework, telelearning, distance education
• political communication
• communication in conflict and intervention
• crisis/emergency communication

Research and Training Facilities
Assessment of Technology in Context Design Laboratory
Graduate Resource Centre
Interactive Media Lab (network and multimedia studies)
Media Analysis Laboratory
Sonic Research Studio and Soundscape Archives
Telematics Laboratory

Graduate School of Communication
MA Program

Admission Requirements
Admission requires a bachelor’s degree in communication (with at least a good second-class standing) or an equivalent degree in an interdisciplinary or humanities program, in one of the social sciences, or in socially oriented information systems, or biological sciences. However, qualified students will be accepted only if the communication graduate studies committee finds a suitable senior supervisor. Besides applications from communication students, the school encourages applications from those with experience in humanities, social or biological sciences, and interdisciplinary studies. All applications should be directed to the graduate studies committee and, in addition to general university requirements, should include the following:

• an application form along with the application fee.
• a 3-5 page succinct statement of interests and goals, together with an account of relevant academic and personal background.
• two samples of scholarly and/or other written work relevant to the applicant’s objectives and any tapes, films, etc., the applicant considers relevant.
• three references, at least two of whom should be familiar with the applicant’s academic work.

The application deadline is January 15. The committee announces decisions before the last week of April. Students enter the program in fall term. The school recognizes the special needs of working individuals who wish to upgrade their qualifications. The graduate program in communication has been approved for part time students; however, University regulations require all MA students to complete their studies within 12 full time equivalent terms or six years, whichever is shorter. As a condition of entry into the program, students with undergraduate degrees in disciplines other than communication may be required to take up to two additional courses to complete their MA. These conditions, if applicable, will be specified in the letter of offer as determined by the admissions committee on an individual basis.

Advising and Supervision
Each new student is assigned an interim advisor upon program admission. The student selects a senior supervisor and, in consultation with this faculty member, selects one or two other faculty to serve on a supervisory committee by the beginning of the student’s third term. Although the graduate studies committee (GSC) will endeavor to provide interim supervisors with expertise in the student’s stated area of research interest, there is no obligation to select the interim advisor as senior supervisor.

Degree Requirements
The program may be completed through extended essay, or project or thesis. Each is equivalent. Each requires the completion of the same number of courses, is research based and is subject to external examination. Students determine which option is suitable for their research in consultation with their senior supervisor and supervisory committee.

The thesis represents a longer form of research and is normally between 80 to 100 pages, inclusive of all bibliographies and appendices. The extended essays require completion of two essays of not more than 40 pages, which may be on related fields, but which may not substantively duplicate papers presented in course work. The project does not involve a printed work but the student may present an alternative format such as a CD-ROM, website, video or audio documentary.

PhD Program
The school will offer PhD students the opportunity to choose from the fields of study and research listed above under Faculty and Areas of Research and Fields of Study and Research.

Admission Requirements
Admission requirements for this program will normally include a master’s degree or an exceptional record of undergraduate and/or graduate work in a relevant area of study. Enrolment is strictly limited by the school. For general university admission requirements, see “Graduate General Regulations” on page 243. In addition to satisfying general requirements, applicants are asked to provide

• an application form along with the application fee.
• a 2-3 page succinct account of their past academic experience, scholarly work, and research accomplished or in progress.
• an account of the applicant’s relevant previous experience including teaching and degree of responsibility for course content
• samples of scholarly writing, research reports, or other material.
• references from three persons (at least two of whom should be familiar with the applicant’s academic work)
• a brief outline of the applicant’s research objectives, with representative bibliographical references and other source material, where applicable

Students will normally enter the program in the fall term. The annual deadline for applications is January 15. The committee will announce its decisions to applicants before the last week of April.

Degree Requirements
All doctoral candidates complete course work, take a comprehensive exam, and submit a dissertation which demonstrates an ability to make an original contribution to the communication field. Candidates normally satisfy the following requirements.

Course Work
Students must complete course work consisting of a minimum of nine graduate courses for those with a bachelor’s degree (including CMNS 860), or five graduate courses for those who have a master’s degree. The graduate studies committee may require additional courses depending on the student’s background and dissertation project. These courses are normally completed before taking the comprehensive examinations, or beginning a dissertation, and will include the following:

• two courses from group 1
• one course from group 2
• two additional courses, at least one of which is selected from within the school. No more than one may be taken with the same instructor, except by permission of the graduate studies committee.

Group 1 Courses: Surveys of History and Theory
CMNS 800, 802, 804

Group 2 Courses: Research Design and Methods
CMNS 801, 805

Group 3 Courses: Research Area Courses
CMNS 815, 830, 840, 845, 856, 857, 858, 859

Group 4 Courses: Research Internship and Fieldwork
CMNS 881, 882

Group 5 Courses: Directed Readings and Studies
CMNS 850, 851, 880

Group 6 Courses: Colloquia and Theses
CMNS 860, 898

Co-operative Master’s Option
In the fall of 1998, the School of Communication introduced a co-operative education option on a trial basis for master’s students. This program combines professional work experience with academic studies. After the first two terms of the program, students may alternate work and academic terms. All work positions are in paid study related jobs and may lead to the communications project or extended essay in lieu of a master’s thesis. Application for the co-op program is made through the school’s co-op co-ordinator and the Co-operative Education office.

Simon Fraser University 2007 - 2008 Calendar
School of Computing Science


Director
U. Glässer BSc, MSc, PhD, Habilitation (Paderborn)
Graduate Program Director
F. Popowich BSc (Alta), MSc (S Fraser), PhD (Edin)

Faculty and Areas of Research
For a complete list of faculty, see “School of Computing Science” on page 112 and www.cs.sfu.ca

CMNS 800, 802, 804

Group 1 Courses: Surveys of History and Theory

CMNS 810, 805

Group 2 Courses: Research Design and Methods

CMNS 815, 830, 840, 845, 855, 858, 851, 858, 859

Group 3 Courses: Research Area Courses

CMNS 881, 882

Group 4 Courses: Research Internship and Fieldwork

CMNS 850, 851, 880

Group 5 Courses: Directed Readings and Studies

CMNS 860, 895, 899

Group 6 Courses: Colloquia, Theses and Comprehensives

The Comprehensive Examination
In consultation with their supervisory committee, students must apply to take the comprehensive examination following completion of required course work and normally no later than the sixth term. Upon passing, the student is admitted to full degree candidacy. The examination may be retaken once.

To prepare for the comprehensive exam, students select and design two comprehensive fields. Fields may be related to the dissertation topic itself or carve out an area of potential teaching competence. At least one examination shall survey a range of theoretical or methodological frameworks within the study of communication to meet a breadth requirement.

The student submits definition papers, including bibliography, on each of the fields in preparation for both a written and oral examination.

Dissertation Proposal

Students enroll in CMNS 889 in the term immediately following completion of the comprehensives, and will present a full dissertation proposal to their supervisory committee. Specific guidelines for the comprehensive examinations and dissertation proposal are available from the school’s graduate program co-ordinator.

An Original Dissertation

PhD students complete a doctoral dissertation that demonstrates an ability to make an original contribution to the field of communication.

Advising and Supervision

Students are advised to read section 6 of the General Regulations and the school’s Guidelines for Supervisory Committees.

Each new student is assigned an interim advisor upon program admission. The student is expected to select a senior supervisor and, in consultation with this faculty member, to select two or three other faculty to serve on a supervisory committee by the beginning of the student’s third term. Although the graduate studies committee will endeavor to select interim advisors with expertise in the student’s stated area of research interest, there is no obligation to choose the interim advisor to be senior supervisor.

Students have the right to discuss their programs and status with communication graduate studies at any stage, to ask for a review of any recommendation or grade, and to appeal any committee, supervisor or faculty decision.
Research Facilities

The school operates several interconnected local area networks in cooperation with other Faculty of Applied Sciences departments. These networks are connected to Simon Fraser University LAN, the campus-wide network, for access to the Internet. Facilities include over 300 networked workstations, file servers, CPU servers, and other specialized systems. The workstations are mostly SUN UltraSparc and PC, with some Silicon Graphics and Macintosh workstations. Additionally, the school has comprehensive resources to facilitate VLSI design, simulation, fabrication and testing.

Other computing resources are provided by Academic Computing Services including six large SGI 4D multi-processor systems, four Sun SPARC-II computers, an IBM RS6000, and an Auspex file server. These systems and a range of software and services are available to the campus community.

Degrees Offered

The school offers programs leading to the MSc and PhD. It provides graduate studies in theoretical computing science; artificial intelligence; database systems; computer graphics and multimedia computing; hardware design; distributed computing; programming languages and systems; computer vision and medical imaging.

Admission Requirements

To qualify for MSc program admission, a student must satisfy the University admission requirements stated in section 1.3 of the Graduate General Regulations and must have a bachelor’s degree or the equivalent in computing science or a related field.

To qualify for admission to the PhD program, a student must satisfy the University admission requirements stated in Graduate General Regulations 1.3 (page 243) and

• have a master’s degree or the equivalent in computing science or a related field or
• have a bachelor’s degree or the equivalent in computing science or a related field, with a cumulative grade point average of 3.5 (on a scale of 0.0-4.0) or the equivalent.

At its discretion, the school’s graduate admission committee may offer either MSc or PhD admission to students applying to the PhD program without a master’s degree or equivalent in computing science or a related field. Students enrolled in the MSc program may apply to transfer to the PhD program after two terms in the MSc program; the school’s evaluation procedure for such applications is the same as that used for outside applicants.

Breadth and Course Requirements

For purposes of defining the MSc and PhD breadth requirements, a set of sub areas are identified and grouped into three major areas: formal topics in computing science, computer systems, and knowledge and information systems. Table 1 shows the standard sub areas within each area.

Table 1

Area I – Formal Topics in Computer Systems

<table>
<thead>
<tr>
<th>algorithms and complexity</th>
<th>formal logic and language semantics</th>
<th>discrete mathematics</th>
<th>operations research</th>
</tr>
</thead>
</table>

Area II – Computing Systems

operating systems and networks computer design and organization programming languages and compilers software methodology and engineering

Area III – Knowledge and Information Systems

artificial intelligence and robotics database and information retrieval systems numerical and symbolic computing computer graphics and interfaces

The course requirements for the MSc and PhD degrees each have a distribution requirement to ensure breadth across the major areas defined in table 1. This requirement specifies the number of courses and sub-areas selected from each of the three major areas. At its discretion, the graduate breadth evaluation committee may accept requests to define sub-areas other than those in table 1 to satisfy MSc or PhD breadth requirements.

Supervisory Committees

A supervisory committee, at either the MSc or PhD level, consists of the student’s senior supervisor, at least one other computing science faculty member, and others (typically faculty) as appropriate. The choice of senior supervisor should be made by mutual consent of the graduate student and faculty member based on commonality of research interests. The student and senior supervisor should consult on the remainder of the committee members.

Graduate General Regulations 1.6 specifies that a senior supervisor be appointed normally no later than the beginning of the student’s third term in the program, and that the remainder of the supervisory committee be chosen normally in the same term in which the senior supervisor is appointed.

Research Topics Seminars

The research topics seminar series is presented over the course of the year by faculty and graduate students. Faculty presentations acquaint new graduate students with the research interests of the faculty. Graduate student presentations typically showcase thesis research. Students in the first year of graduate study are required to attend faculty research topics seminars to become familiar with the research interests of the faculty.

MSc Program

Students are expected to acquire breadth of knowledge through a sequence of courses and depth of knowledge through completion and defence of a thesis or a project. Under normal circumstances, an MSc program should be completed within six terms and should not require longer than eight terms. An MSc student must choose between thesis and project options by the end of the second term. Any change in option thereafter must be approved by the graduate program committee.

PhD Program

PhD students must demonstrate breadth of knowledge as outlined below, and demonstrate original research through the completion and defence of an original thesis. Under normal circumstances, the program should be completed within 12 terms and should not require longer than 15 terms.

Breadth Requirement

PhD students must demonstrate breadth to the equivalent of at least 24 graduate credit hours (typically eight courses), beyond the bachelor’s degree, subject to the following distribution.

• at least four of the eight courses must be taken at Simon Fraser University
• courses must include at least 700 division courses, such that one course is drawn from each of the areas I, II and III of Table 1

A 700 division course used to satisfy the PhD breadth requirements might be waived and replaced by an 800 division course. In such cases, the students must produce convincing evidence to the graduate program committee that they have taken a comparable course or have comparable training in industry.

Up to two relevant courses outside of computing science may be used in satisfying the breadth requirement, subject to approval by the student’s supervisory committee and the graduate breadth committee. A PhD student must achieve a minimum 3.4 CGPA and passing marks in all courses.

Students submit, within two months of program entry, a proposal to satisfy breadth requirements, or may request that up to four courses and any portion of the breadth distribution be waived based on previous graduate work, or by examination. The graduate breadth committee may approve the proposal or recommend alternatives at its discretion.

Depth Requirement

PhD students demonstrate depth of knowledge in their research area through a public depth seminar and oral examination, give a thesis proposal seminar, and submit and defend a thesis based on their research interests.
independent work which makes an original contribution to computing science.

Depth Examination

The depth seminar and examination may be scheduled at any time following the completion of breadth requirements. Typically this is between the fifth and seventh terms in the PhD program; a recommendation is made by the graduate breadth committee, in proportion to the amount of course work required to satisfy the breadth requirement. The examining committee consists of the supervisory committee and one or two additional examiners recommended by the examining committee, and approved by the graduate program committee. The depth exam centres on the student’s area of research. The examining committee, in consultation with the student, specifies the topics in the examination. The student prepares a written survey and gives a public depth seminar; the oral exam follows, and then the committee meets to evaluate the student’s performance in the program to that point. The committee’s evaluation is diagnostic, specifying additional work in weak areas if such exists. A second depth examination or withdrawal from the program may be recommended in extreme cases.

Thesis Proposal

The student, in consultation with her/his supervisory committee, formulates and submits, for approval, a written thesis proposal consisting of a research plan and preliminary results. The student gives a seminar and defends the originality and feasibility of the proposed thesis to the supervisory committee. The thesis proposal is normally presented and defended within three terms of the depth examination.

Thesis Defence

Regulations specifying the examining committee composition and procedures for the final public thesis defence are in the Graduate General Regulations. PhD students give a seminar; typically this will be after their thesis research and is presented in the interval between distribution of the thesis to the committee and the defence.

School of Engineering Science


Director
M. Saif BSEE, MSEE, PhD (Cleveland), PEng

Graduate Program Chair
S.P. Stapleton BEng, MEng, PhD (Carleton), PEng

Faculty and Areas of Research
For a complete list of faculty, see “School of Engineering Science” on page 117.

J.V. Bajic – signal processing and applications in image and video coding, multimedia communications, and computational biology

M.F. Beg – computational anatomy: algorithms for segmentation, registration and shape analysis from medical images. Applications to structure and function in the brain, heart and peripheral muscles and nerves

J.S. Bird – signal processing, sonar, underwater acoustics, underwater acoustic transducers, bottom mapping and target detection applications

T.W. Calfert* – information processing in man and machines, biomedical applications, graphics

J.K. Cavers – wireless communication: modulation, single- and multi-user detection, adaptive antenna arrays, iterative processing, sensor networks

G.H. Chapman – microelectronics, EMS, IC defect avoidance designs, imaging sensors, microsensors, biomedical optics, microfabrication, laser applications

V. Cuperman* – signal processing, speech coding and recognition, multimedia information compression, digital communications, digital signal processing structures and hardware

J.C. Dill* – information visualization, visual analytics, human-computer interaction

D.A. Georga* – adaptive signal processing for communications and remote sensing systems

F.G. Golnaraghi – application of smart sensors and material systems to the medical, industrial and transportation industries; vibration, isolation, tool-tracking and suspension systems

B.L. Gray – microfluidics, interconnect and microassembly, biomedical microdevices and instruments, high-aspect-ratio microfabrication techniques

W.A. Green* – distributed intelligence, multi-agent and haptic systems, wireless peer-to-peer networks. Applications to manufacturing, robotics, and automation systems

K.K. Gupta – algorithmic robotics, robot motion and path planning algorithms, obstacle avoidance, sensor-based motion planning, range sensing for robotics

R.H.S. Hardy – wireless communication networks, protocols and performance, access control and management of multimedia networks, wide area wireless and ad hoc networks

P.K.M. Ho – wireless communications, with emphasis on space-time coding and processing modulation, coding, detection, and channel estimation

R.F. Hobson – system-on-chip, low power embedded memory, embedded processor design

J.D. Jones – finite element analysis, heat transfer, thermodynamics and their application to micromachining; history and philosophy of engineering

B. Kaminska – wireless sensor networks, micro-medical devices, biosensors, wearable electronics; physiological, behavioral, and environmental monitoring; microelectronic design, test, and fault-tolerance; design and test automation algorithm

D.C. Lee – computer and communications networks, wireless communications, multimedia transport

A.M. Leung – microelectronics, integrated circuit technology, integrated micromachined physical sensors, optical lithography

J. Liang – image/video compression, image/video processing, filter bank, wavelets, multimedia communications, wireless communications

C. Menon – robotics, mechatronics and biomimetics, particular interest in biomedical and space engineering

M. Moallem – mechatronics, real-time systems, embedded computer control systems, smart sensors and actuators, robotics, control applications, linear and nonlinear systems

M. Parameswaran – silicon and plastic MEMS technology development; microelectronic sensors and actuators, micromechanical device and processing simulation; biomedical diagnostic chips and systems

S. Payandeh – robotics, distributed robotics, mechanics-based modeling and rendering, deformable objects, multi-modal interface, haptic devices, haptic rendering, medical robotics

A.B. Rad – autonomous systems, mapping and localization in mobile robots, intelligent control and soft computing

A.H. Rawicz – biomedical transducers (sensors and actuators), optical engineering and biophotonics, brain-computer interfaces, vision sensors, reliability of biomedical devices

S.N. Robonovitch – dynamics and control of human movement, postural stability and balance, osteoporosis and hip fracture prevention, orthopedic biomechanics, rehabilitation engineering

P. Saeedi – computer vision, machine learning in computer vision, motion/trjectory tracking, object recognition using vision, structure from motion, and automatic 3D map generation

M. Salii – estimation and control theory, model based fault diagnosis, large scale systems, optimization, and application of the above to engineering systems

S.P. Stapleton – passive RF/microwave circuits, GaAs monolithic microwave integrated circuits, nonlinear RF/microwave devices, active RF/microwave circuits

M.V. Sarunic – biomedical optical imaging, optical coherence tomography (OCT), low-coherence interferometry, optical microscopy

L. Shannon – computing system design; system-on-chip and network-on-chip; architectures; reconfigurable computing and FPGAs; embedded system design; on-chip CAD tools

S.P. Stapleton – power amplifier linearization, high efficiency power amplifier design techniques, high speed digital signal processing, monolithic microwave integrated circuits, integrated RF/DSP systems, high performance device characterization

M. Syrzycki – microelectronics, semiconductor devices, analog and mixed signal CMOS ICs, integrated circuit technology, integrated sensor Microsystems, vision sensors, design for manufacturability of analog and digital CMOS ICs

L. Tjaskovic – communication networks (traffic characterization and modeling, protocols and network control algorithms); nonlinear systems (simulation tools, theory of nonlinear circuits, analysis of complex networks)

R.G. Vaughan – personal and mobile communications, compact antennas, diversity antennas, propagation, signal processing, DSP techniques wireless systems, microwave techniques, multiprotocol and MIMO systems

Associate Members
For areas of research, refer to the department listed.

M. Donelan, Kinesiology
J.A. Hoffer, Kinesiology
emeritus

Degrees Offered

The School of Engineering Science offers two distinct master’s degrees, Master of Engineering (MEng), or Master of Applied Science (MASc) and a Doctor of Philosophy (PhD) degree.

Previous Credit

If the subject matter of a listed course has been previously completed with graduate credit, the course may not be taken again for credit.

Master’s Program

The MEng program, for part time study by practising engineers, is based on a set of courses normally offered in the evenings, plus a project performed in industry. The principal areas of study are electronics; communications and signal processing; intelligent systems; and control theory. The MASc is a full time program with primary emphasis on the thesis, rather than course work, is more exploratory than the MEng, and covers a greater range of study.

Admission Requirements

The normal admission requirement to the MEng and MASc programs is a bachelor’s degree in electrical engineering, computer engineering, engineering science or a related area, with a CGPA of at least 3.0 (B grade) from a recognized university, or equivalent. The number of faculty members limits the number of MASc students admitted into the programs.
Transfer from MEng Program to MASc Program
Normally transfer from the MEng program to the MASc program will be considered under the following conditions.
- Undergraduate GPA. Minimum undergraduate CGPA of 3.3 required.
- MEng GPA. On at least two courses, a minimum CGPA of 3.5.

Degree Requirements – MEng Program
Course Work
MEng candidates complete a minimum of 21 graduate credit hours. All students take ENSC 820, specialize in an area of study, and complete the required course(s) as follows. Students specializing in communications take ENSC 805 and 810; electronics specializations take one of ENSC 851, 852 or 853; and intelligent systems or control theory specialists take ENSC 801. Elective courses (see below) normally make up the remainder of the 21 required credit hours. Additional courses may be required to correct deficiencies in the student's background.

In addition to course work, a student must complete a project, which is expected to take a minimum of two full-time equivalent months. In the event that the project is performed in the student's workplace, the student will receive academic supervision from the senior supervisor, and day-to-day supervision from the student's manager, or designated associate. Industrial supervisors, who are on the supervisory committee, will be appointed by the graduate chair in consultation with the senior supervisor. In very small companies, alternate arrangements will be made for industrial supervision.

In addition to submission of a technical report at project completion, the student makes an oral presentation to the supervisory committee and the graduate chair. A grade will be assigned based on the report's quality, the presentation, and the student's understanding of the subject. A grade of 'complete' or 'in progress' will reflect the majority decision. In the case of an 'in progress' grade, the student re-submits the project report and presents it again.

MEng Fees
Students may complete their program before paying the minimum total fee for a master's degree. In such cases, an additional payment is required prior to graduation to satisfy the minimum fee requirement of six full-time fee units. See “Graduate Fees” on page 251.

MASc Program
Course Work
MASc candidates complete 30 credit hours consisting of a minimum of 12 credit hours plus a thesis equal to 18 credit hours. In consultation with the senior supervisor, the courses will normally be selected from the list below, except that ENSC 820 may not be used towards the MASc course requirements. At least six credit hours must be ENSC graduate courses. At most, three credit hours may be directed studies. Additional courses may be required to correct deficiencies in the student's background.

The thesis is based on an independent project with a significant research component. The thesis defends the student's work at an exam, in accordance with regulations.

Graduate Research Internship
With the approval of the supervisory committee, students accepted in the MASc or PhD programs may do research internship in industry. The responsibility for finding a suitable internship rests with the student, though the senior supervisor will provide guidance.

In addition to satisfying the program's degree requirements, students who choose this option must satisfy the following conditions.
- Proposal
  The proposal must be approved by the supervisory committee and by the graduate committee. The proposal must include the following.
  - justification for undertaking the work in industry
  - agreement regarding intellectual property and publications
  - funding arrangement
  On-campus Presence
  During the internship, the student must spend at least one day per week (or equivalent as approved by the graduate committee) on campus to meet with his/her supervisor and attend regular seminars. This is in addition to time spent on campus for course work.
- Oral Presentations
  A minimum of two oral presentations for the supervisory committee (not including the thesis defence) on the progress of the student's work will be given during the internship.
- Duration
  The duration of the internship will not exceed two terms, in the case of a MASc student, or four terms, in the case of a PhD student.
- Failure to Comply
  See “1.8 Progress, Withdrawal and Leave” on page 247 in the Graduate General Regulations.

PhD Program
Admission Requirements
To qualify for admission, a student must have a master's degree in electrical engineering, mechanical engineering, physics, computer science or a related field, have submitted evidence that he or she is capable of undertaking substantial original research in engineering science, and have identified a faculty member willing to act as senior supervisor. See “1.3 Admission” on page 243 for other PhD program admission requirements.

Residence Requirement
Students will conform to the residence requirement (see “1.7 Residence and Course Requirements” on page 246). An examination committee is formed as defined in “1.9.3 Examining Committee for Doctoral Thesis” on page 248. Students conform to residence requirements (see “1.7.3 Residence Requirement for the Doctoral Degree” on page 247). The senior supervisor will be an engineering science faculty member approved by the graduate program committee.

The student's progress will be reviewed every 12 months by a supervisory committee of three or more faculty members. At each annual review, the student presents a summary of his/her work to date, with the first review being the research proposal defence described in the section for Qualifying Examination (see above). Students not making satisfactory progress in their research topics, or failing to demonstrate satisfactory knowledge and understanding of recent publications in their general area of research, or failing to have their revised research proposal approved by the supervisory committee within 20 months of admission, may be required to withdraw as per section “1.8.2 Review of Unsatisfactory Progress” on page 247.

Directed Studies and Special Topics Courses
Directed studies (ENSC 891, 892) and special topics (ENSC 894, 896) courses may be offered by the following research groups, subject to student interest and demand.

Communications Group
- estimation theory
- network performance evaluation
- advanced modulation techniques
- spread spectrum communications
- information flow and decision theory
- adaptive arrays
- active and passive sonar systems
- synthetic aperture radar
- multimedia signal processing
- multimedia communications
- ad hoc and sensor networks
- small attennas

Microelectronic group
- analog VLSI signal and information processing
- applied solid state electronics
- CMOS compatible micromachining
- embedded VLSI systems
- low power, low noise, high frequency circuits
- optoelectronic devices
- photonics and laser applications in engineering
- reliability engineering
- sensor – principles and applications
- VLSI circuits for telecommunications
Intelligent Systems and Control Group

- design optimization
- algorithms for robotics
- intelligent design
- intelligent control of robotic systems
- intelligent manufacturing systems
- model-based fault diagnostics in control systems
- multivariable control systems
- nonlinear control systems
- numerical modelling of heat transfer
- robotic synthesis

Courses Offered by Other Departments

Of particular interest to engineering science graduate students are these courses. Complete descriptions can be found elsewhere in this Calendar.

- BUEC 620-4 Analysis of Dynamic Processes
- CMPT 729-3 Robotics
- CMPT 750-3 Computer Architecture
- CMPT 815-3 Algorithms of Optimization
- CMPT 821-3 Robot Vision
- CMPT 822-3 Computational Vision
- CMPT 827-3 Expert Systems
- CMPT 851-3 Fault-Tolerant Computing and Testing
- CMPT 852-3 VLSI Systems Design
- CMPT 853-3 Computer-Aided Design/Design Automation for Digital Systems

Degrees Offered

The program offers courses leading to an MA, MSc and PhD, and provides graduate study in diverse areas related to people, technology and society, especially the areas of art, design, games and knowledge management.

Fields of Study, Research, and Research Facilities

Faculty conduct research in a variety of areas including design, digital media, performance and media art, human-computer interaction, computer supported co-operative work, and information technology. Specific areas include collaborative product development; computational design; design science; digital game design; digital storytelling; human figure, face and character animation; information visualization; interactive design; interactive narrative; knowledge representation and management; knowledge visualization; media and telecommunication policy; performance in mediated environments; scientific visualization; visual analytics; and ubiquitous computing and wearable computing.

Faculty support is research by NSERC, SSHRC, the Networks of Centres of Excellence, Canada, Heritage Canada, the Canadian Foundation for Innovation, the BC Knowledge Development Fund, BCcampus and others.

School of Interactive Arts and Technology

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7499 Tel, 778.782.7488 Fax, www.sfu.ca/~siat/grad

Director

J. Bowes AB (Hamilton College), MSc (Syd), PhD (Mich State)

Graduate Program Chair

C. Shaw BMag (Will), MSc, PhD (Alta)

Faculty and Areas of Research

For a complete list of faculty, see “School of Interactive Arts and Technology” on page 123.

- A.N. Antle – child-centred design and evaluation of interactive technologies, mixed reality and location-based interaction models, play and informal learning in interactive environments, industry-based, human-centred design practice
- L. Bartram – collaboration interfaces, perceptual issues in information visualization, methodologies for interface evaluation, and human interaction in complex systems
- J. Bizzoni – interactive narrative; critical analysis of interactive experience; the craft of game design; production aesthetics for large flat-screen video display; educational technology and distributed learning
- J. Bowes – digital media and telecommunications policy; computer mediated communication and online commerce; technology transfer; minorities and media; history of technology
- T.W. Calvert** – computer systems for the animation and choreography of human figures; networked multimedia systems for learning; the design and evaluation of human-computer interfaces for complex systems; computer graphics
- J. Dill† – information visualization, visual analytics, design visualization, haptic rendering, intelligent graphical interfaces
- S. DiPaola – collaborative knowledge systems; interactive art expression systems; facial and character systems for animation and real-time interactivity; alternative and social user interfaces; 3D interactive avatars and agent collaboration systems
- M.V. Engeli – teleomatic architectures for creative collaboration, computer game worlds, multi-user virtual environments, digital storytelling, information visualization and navigation
- H.I. Erhan – design cognition, computer-aided design, design requirements, component-based design, formal methods, software engineering
- B.D. Fisher – interaction science cognitive systems, human-information discourse, visual analytics, games and simulations
- D.J. Gromala – biopotentials, meditation and art, multiple levels of awareness, biomedia, interface design, phenomenological philosophies of experience, critical analyses of interactive art, media and culture, medical visualization, qualitative research methods
- M. Hatala – knowledge representation and knowledge management; ontologies and semantic web; intelligent information retrieval; organizational learning; online learning
- S. Kozel – live performance in mediated environments; philosophies of embodiment; motion capture and motion tracking systems; artificial life: discourses and practices; wearables; performance and design; Interactive installation
- A.D.N. Rajah – post-traditional media, sacred spaces; sacred art and digital technology, interfaces for navigating sacred content
- T. Schiphorst – authoring methodologies; human computer interaction; wearable technology; multi-modal interaction
- C. Shaw – virtual environments, 3D free-form surface design, two-handed 3D user interfaces, bioinformatics visualization, scientific visualization, information visualization, human-computer interaction, computer graphics
- R. Wakkary – interaction design; multi-user interaction; design methods in interaction and games; collaborative authorship; digital culture and online content; online learning
- R. Woodbury – design space exploration, parametric design, online interpretations, computer supported co-operative work, online learning *emures

Program Goals

This program offers master's and doctoral degrees at the intersection of art, design, media and information technology. The program offers particular expertise in the computational and interactive aspects of art, design, new media learning, business, computer games, cognition, performing arts, social science and cultural studies. The program is geared toward students who wish to learn about technology and how it is made and used. Students who enjoy working with a vibrant and diverse group of faculty and fellow students will enjoy this program.

The program brings together faculty and students from a variety of disciplines to the study of technology both in and across the participating disciplines. The program has the quadruple objectives of: first, research and development of new computational technology in the context of complex human organizations and situations; second, research into the acts of designing, making, and managing technology; third, inquiry into and use of research methodologies that foster interdisciplinary collaboration and the development of new technologies; and fourth, application of new technologies in society and industry, particularly in creative areas of art, design, games and media.

A hallmark of the program is its emphasis on interdisciplinary; team endeavour, combining of concept and practice, and use of technologies as a vital instructional base. All graduate students take a mandatory course in research methods and strategies, which critically evaluates research methodologies and the role of research collaboration among disciplinary experts. Students learn in an environment that employs traditional course work, one-on-one mentoring, and in-depth research into a topic lead by a research faculty. In short, students are immersed in an environment that is both technology rich and structured for interdisciplinary co-operation.

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Admission Requirements

There will be annual admission into the program with the possibility of early or out-of-cycle admissions in special cases.

The minimum standards will be those of Simon Fraser University, as described in the Graduate General Regulations (page 243), augmented by the following specific requirements.

It is our aim to admit groups of students with diverse backgrounds, across the broad areas in which our faculty have disciplinary expertise. The following admission requirements are designed to encourage such diversity while setting minimum standards for acceptance into the program.

Master's students will be admitted to study for either the MA or MSc degree. Students may articulate between the MA and MSc degrees by meeting the admission and program requirements of the degree to which they articulate and with the approval of the graduate program committee. A student may make one application for articulation.

Minimum Standard Entrance Requirements for MA and MSc Programs

• an undergraduate degree in a field related to the proposed program of study. For example: BSc computer science, BASc engineering (electrical, communications, computer engineering) BA in education, management, economics or communications, BFA in art, design or performing arts, BA in art, art history, architecture, linguistics, psychology or philosophy, BArch, BLArch, BID) or

an undergraduate degree in another, related discipline. Applicants under this category are required to make the case for: the relationship between the discipline in which they hold their previous degree or degrees and this program; and how they would benefit from this program.

• for applicants to the MSc, a record of substantial university course work in scientific and/or technological fields.

• demonstrated ability in computing. Students not meeting this criterion may be admitted conditionally subject to Simon Fraser University regulations and successful completion of a foundational course in computing (this course will not count towards graduation requirements).

• demonstrated ability in academic writing. Students who do not meet this criterion may be admitted conditionally subject to Simon Fraser University regulations and successful completion of selected writing intensive courses within the program (such courses will count towards graduation requirements).

• a minimum cumulative GPA of 3.0 or better at a Canadian university, or equivalent, for the undergraduate degree.

• a suitable letter of intent explaining the applicant's motivation for selecting this degree program; summarizing relevant skills, training and experience; describing proposed research directions within the program and indicating how the course of study would contribute to future intellectual or professional growth. All of the above four points should be explicitly addressed in the letter of intent.

• three reference letters each from a suitably qualified person.

Minimum Standard Entrance Requirements for PhD Program

• a graduate degree in a field related to the proposed program of study. For example: MSc computer science, MASc engineering (electrical, communications, computer engineering) MA or MSc in education, management, or economics, communications, MFA in art, design or performing arts, MA in art, art history, architecture, linguistics, psychology or philosophy, MArch, MLArch) or

a graduate degree in another, related discipline. Applicants under this category are required to make the case for: the relationship between the discipline in which they hold their previous degree or degrees and this program; and how they would benefit from this program.

or

an undergraduate degree in one of the two categories above. Applicants under this category are required to demonstrate both high academic standing (3.5 GPA or better at a Canadian university, or equivalent), for the undergraduate degree, and evidence of research aptitude and accomplishment.

• a record of accomplishment in computing. Students not meeting this criterion may be admitted conditionally subject to Simon Fraser University regulations and successful completion of a foundational course in computing (this course will not count towards graduation requirements).

• a record of accomplishment in academic writing. Students not meeting this criterion may be admitted conditionally subject to Simon Fraser University regulations and successful completion of selected writing intensive courses within the program (such courses will count towards graduation requirements). Applicants should submit two samples of their scholarly written work.

• a minimum cumulative GPA of 3.0 or better at a Canadian university, or equivalent, for the Master's degree.

• a suitable letter of intent explaining the applicant's motivation for selecting this degree program; summarizing relevant skills, training and experience; describing and critically supporting proposed research directions within the program and indicating how the course of study would contribute to future intellectual or professional growth. All of the above four points should be explicitly addressed in the letter of intent.

Advanced Admission Requirements for both Programs

English Language Proficiency

Students must demonstrate proficiency in the English language through one of the following means.

• a previous undergraduate or graduate degree completed at a university where English is the applicant's primary language of instruction.

• a minimum score of 570 on the paper-based TOEFL test with a minimum TWE score of 5

• a minimum score of 230 on the computer-based TOEFL test with a minimum TWE score of 5

Portfolio/Interview

Candidates who are considered for admission may be required to submit a work portfolio and/or be required to attend a personal or telephone interview during the latter stages of the admission process.

Advising and Supervision

Student supervision will comply with graduate general regulations section 1.6 Supervision. Students entering the program will be assigned an interim advisor. The interim advisor has two main tasks: advising the student on issues related to study within the program and assisting the student in identifying and approaching potential senior supervisors. There is no requirement that the interim advisor has a role in supervision once the senior supervisor is approved.

The normal size of MA and MSc supervisory committees is two members. The normal size of a PhD supervisory committee is two or three members.

MA and MSc Programs

Degree Requirements

The primary requirement for the MA and MSc degrees is the thesis. The course requirements are aimed to support the student's thesis research. Students fulfil the following requirements to complete their degree. The MA and MSc requirements are similar, and are thus presented together. As requirements differ, they are listed respectively for each degree.

Required Courses

Students must complete the following courses:

IAT 800-3 Foundations of Computational Art and Design

This is a mandatory course for all students in the program, but may be waived for those students having had sufficient formal educational background in art and design computation.

IAT 801-3 Research Methods and Strategies

Students must complete at least four additional courses as described below.

Core Courses

MA students must complete two courses from

IAT 810-3 New Media

IAT 811-3 Computational Poetics

IAT 812-3 Cognition, Learning and Collaboration

IAT 813-3 Artificial Intelligence in Computational Art and Design

IAT 814-3 Knowledge Visualization and Communication

MSc students must complete two courses from

IAT 812-3 Cognition, Learning and Collaboration

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IAT 845-3 Methods for Research into Technological Systems
IAT 844-3 Spatial Computing
IAT 845-3 Methods for Research into Technological Systems

MSc Elective Requirements
Students must complete at least one course from the following list of MSc electives.
IAT 840-3 Models of Networked Practice
IAT 842-3 Theory and Design of Games
IAT 844-3 Spatial Computing
IAT 845-3 Methods for Research into Technological Systems

plus a special topics course approved by the graduate program committee for study towards the MSc degree
plus a directed readings course approved by the graduate program committee for study towards the MSc degree.

The following courses may be used to satisfy elective requirements subject to the MSc elective requirements above. For MA students, there is no corresponding elective requirement, so MA students have more options.
IAT 830-3 Learning Design and Media
IAT 831-3 Encoding Media Practice
IAT 832-3 Exploring Interactivity
IAT 833-3 Embodiment and Electronic Performance
IAT 840-3 Models of Networked Practice
IAT 842-3 Theory and Design of Games
IAT 844-3 Spatial Computing
IAT 845-3 Methods for Research into Technological Systems

Designated Research Methods Courses
The following courses are designated as research methods courses satisfying the research methods requirement in the elective course requirements. This course requirement is intended to be relevant to the student’s thesis work and must be approved by the student’s supervisor and the graduate program committee as being so appropriate. Courses external to SIAT may also be used to satisfy this requirement and must be approved by the student’s supervisory committee and the graduate program committee.
IAT 883-3 Embodiment and Electronic Performance
IAT 840-3 Models of Networked Practice
IAT 845-3 Methods for Research into Technological Systems

Research Colloquium
The research colloquium is an important part of the scholarly life of the program. Master’s students are required to present in one seminar and are expected to attend a large majority of the seminars in the series for at least two academic terms.

Co-operative Education
On an optional basis and with approval of the graduate program committee, master’s students may participate in co-operative education by placement in a government or private research agency to gain practical experience in their thesis or dissertation area. The co-operative education option is separate from course work in the program and serves as an adjunct to the thesis/dissertation process.

Co-operative education is intended to provide opportunities for master’s students to gain practical research experience in settings external to the program. Enrolment in co-operative education requires successful completion of at least two courses within the program, good academic standing, no deferred grades and approval of the graduate program committee.

This co-operative education option is separate from course work in the program and serves as an adjunct to the thesis/dissertation process. Students wishing to participate in this program are responsible for making all arrangements external to the program. Students participating in co-operative education will be eligible for the co-op enrollment fee as listed in the Graduate Fee Schedule of the Graduate Regulations.

IAT 861-0 Practicum I
IAT 862-0 Practicum II

Master’s Thesis
Master’s students produce and defend a thesis as part of degree requirements. All Simon Fraser University regulations on thesis form and examination process apply. The standards of scholarship – quality of work – set for the master’s degree are no less than those for the doctorate, except the scale, scope and originality of the thesis may be less. Commonly, the master’s thesis shows refinement of a developed scholarly specialization, a useful replication of established note and in some cases a pretesting or prototype of supporting ideas for eventual PhD research.

IAT 897-6 MA Thesis
IAT 898-6 MSc Thesis

PhD Program
Degree Requirements
Students fulfill the following requirements to complete their degree.

Required Courses
IAT 800-3 Foundations of Computational Art and Design
This is a mandatory course for all students in the program, but may be waived for those students having had sufficient formal educational background in art and design computation.

IAT 801-3 Research Methods and Strategies
Students must complete at least five additional courses as described below.

Core Courses
PhD students must complete at least two courses from:
IAT 810-3 New Media
IAT 811-3 Computational Poetics

IAT 812-3 Cognition, Learning and Collaboration
IAT 813-3 Artificial Intelligence in Computational Art and Design

IAT 814-3 Knowledge Visualization and Communication

Electives, Special Topics and Directed Readings
This program is young, its faculty complement is expanding dramatically and consequently, elective offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new special topics courses will be offered that reflect the interest and expertise of new faculty. Course offerings are changing. In 2007/2008 several new sp
and the results of such evaluation will be noted in the course approval and course outline.

Directed readings are seminar or tutorial experiences that develop special research interests in depth and with faculty supervision. Students should not expect to take a directed readings course where there is a substantially similar course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the PhD Dissertation. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally a PhD student would take at most two directed readings courses during his or her degree. Directed readings offered within the program will be approved by the graduate program committee to essentially the same criteria required for approval of a new elective. At the time of approval, a directed readings course may be approved as fulfilling the program's research methods requirement.

IAT 830-3 Learning Design and Media
IAT 831-3 Encoding Media Practice
IAT 832-3 Exploring Interactivity
IAT 833-3 Embodiment and Electronic Performance
IAT 840-3 Models of Networked Practice
IAT 842-3 Theory and Design of Games
IAT 844-3 Spatial Computing
IAT 845-3 Methods for Research into Technological Systems

IAT 881-3 Special Topics I
IAT 882-3 Special Topics II
IAT 883-3 Special Topics III
IAT 884-3 Special Topics IV
IAT 885-3 Special Topics V
IAT 886-3 Special Topics VI
IAT 887-3 Special Topics VII
IAT 888-3 Special Topics VIII
IAT 871-3 Directed Reading I
IAT 872-3 Directed Reading II
IAT 873-3 Directed Reading III

Designated Research Methods Courses
The following courses are designated as research methods courses satisfying the research methods requirement in the elective course requirements. This course requirement is intended to be relevant to the student's thesis work and must be approved by the student's supervisory committee and the graduate program committee.

IAT 833-3 Embodiment and Electronic Performance
IAT 840-3 Models of Networked Practice
IAT 845-3 Methods for Research into Technological Systems

Research Colloquium
The Research Colloquium is an important part of the scholarly life of the program. During their studies PhD students are required to present their research work in at least two seminars as part of this series. Students are expected to attend a large majority of the seminars in the series.

Co-operative Education
On an optional basis and with approval of the graduate program committee, PhD students may participate in co-operative education by placement in a government or private research agency to gain practical experience in their thesis or dissertation area. The co-operative education option is separate from course work in the program and serves as an adjunct to the thesis/dissertation process. Co-operative education is intended to provide opportunities for PhD students to gain practical research experience in settings external to the program. Enrolment in co-operative education requires successful completion of at least two courses within the program, good academic standing, no deferred grades and approval of the graduate program committee. The co-operative education option is separate from course work in the program and serves as an adjunct to the thesis/dissertation process. Students wishing to participate in this program are responsible for making all personal arrangements external to the program. Students participating in co-operative education will be eligible for the co-op enrollment fee as listed in the Graduate Fee Schedule of the Graduate Regulations.

IAT 861-0 Practicum I
IAT 862-0 Practicum II

PhD Comprehensive Examination
The PhD degree requires a comprehensive examination aimed at testing for achievement in interdisciplinarity, breadth of knowledge, depth of knowledge, topic focus and scholarly skill. With the consent of their Supervisory Committee, students may sit the comprehensive examination following completion of required course work. Upon passing, the student will be admitted to full degree candidacy. The examination may be retaken once. As part of preparation to undertake the comprehensive examination, the student shall submit, to his or her supervisory committee, a comprehensive annotated bibliography of readings used throughout course work and readings related to their proposed thesis topic. The student's senior supervisor will inform the graduate program committee of the supervisory committee's consent for the student to sit the examination and will provide a copy of the annotated bibliography.

Upon receipt of the consent and annotated bibliography from the senior supervisor, the graduate program committee will strike an examination committee comprising the student's supervisory committee, the graduate program chair or designate, and one other member of faculty in the School eligible to act as a Senior Supervisor. The graduate program chair or designate shall chair the examination committee.

The examination shall have three sections. The first will test for breadth of knowledge within the student's course of study. The second will test for knowledge of the proposed thesis topic. The third will test for knowledge of and skill with pertinent research methodology. At least two of the sections shall have a required archival component. The examination shall have an oral component that shall test for all three sections.

The examining committee shall refer to the bibliography in preparing the examination. The examination process should not exceed one term in duration from the date of notification to the graduate program committee of the consent to sit for the examination. This time may be longer should a student be required to retake the examination. Specific guidelines for these examinations are available from the graduate program assistant.

PhD Proposal
The PhD degree requires a dissertation proposal aimed at collegial review of the proposed work, development of research formulation and presentation skills and approval of the dissertation work by the supervisory committee and the graduate program chair. The approval of the graduate program chair is largely for oversight issues, for example, required ethics clearances. The dissertation proposal has two components: a research prospectus and a public event with timely notification given to the campus community.

PhD Dissertation
PhD candidates produce and defend a dissertation as part of degree requirements. All Simon Fraser University regulations on thesis form and examination process apply. A successful dissertation demonstrates an original contribution to a student's field of study. The standard of work expected is that of peer-reviewed work by accomplished scholars in their specialization. Candidates are encouraged to consider the professional and career implications of this major scholarly work.

IAT 899-6 PhD Dissertation
Students who are working on their PhD dissertation enroll in this course. This course will not count towards the course work requirements. PhD candidate status is neither required for nor implied by enrollment in this course.

PhD students who have completed an MA or MSc at SIAT
PhD students who have completed a Master's (MA or MSc) degree within the program are not required to complete IAT 800 or IAT 801 as part of their PhD. Such students have an option to apply to the program's graduate program committee for a reduction in course work aimed at breadth and scholarly skill. Students must complete at least one core course and three electives

School of Kinesiology
K9625 Shrum Science Centre, 778.782.3573 Tel, 778.782.3040 Fax, http://fas.sfu.ca/kin

Graduate Program Chair
T.E. Milner, BSc, MSc, PhD (Alta)

Faculty and Areas of Research
For a complete list of faculty, see “School of Kinesiology” on page 125.

P.N. S. Bawa - neuroscience
A.P. Blaber – environmental and aerospace physiology
J. Dickinson – motor learning and human factors*
M. Donelan – locomotion neuromechanics
D.T. Finegood – regulation of carbohydrate metabolism
D. Goodman – motor control and learning
J.A. Hoffer – neural control of movement and neural prostheses
C. Krieger – physiology and pathophysiology of motor control
S.A. Lear – cardiac rehabilitation
C.L. MacKenzie – motor control, human skills
R.G. Marteniuk – motor control
T.E. Milner – human biomechanics/neural control of movement
J.B. Morrison – bioengineering and environmental ergonomics
W.S. Parkhouse – exercise physiology and biochemistry
S.N. Robinovich – biomechanics, falls and fall-related injuries in the elderly
M.P. Rosin – environmental carcinogenesis
P.C. Ruben – molecular basis of inheritable diseases
G.F. Tibbits – cardiac biology
A.V. Vieira – nutritional biochemistry
M.D. White – environmental physiology

Adjunct Faculty
J.M. Berry – environmental carcinogenesis
L. Hove-Madsen – cardiac physiology
A.J. Lomax – 3D technology for endoscopic surgery and human/machine interaction in laparoscopic surgery
P. Pretorius – physiology of aging
D. Robinson – ergonomics and human factors
I. Rossberg-Gempton – social, cultural and psychological factors of health promotion

Simon Fraser University 2007 • 2008 Calendar
All students must take the following two courses.

**MSc Program (Thesis)**

**Degree Requirements**

The MSc Thesis Program requires a minimum of 18 credit hours of graduate courses for a thesis. If a supervisory committee deems that preparation is inadequate, more than this minimum may be required. At least 12 of these credit hours must be from the graduate course offerings in kinesiology.

All students must take the following two courses.

- KIN 801-3 Seminar on Research in Kinesiology
- KIN 802-3 Statistical Applications in Kinesiology Research

Students must also take four additional courses, at least two of which must be from the following.

- KIN 810-3 Integrative Muscle Physiology
- KIN 812-3 Molecular and Cellular Cardiology
- KIN 825-3 Motor Learning and Control
- KIN 840-3 Human Biomechanics
- KIN 850-3 Control Systems in Health and Disease
- KIN 861-3 Neuroscience
- KIN 870-3 Modeling of Physiological Systems

Remaining credit hours may be selected from any KIN graduate courses, and any other graduate courses at Simon Fraser University or other universities with prior approval of the graduate program committee.

Courses will be chosen by the candidate’s supervisory committee after consultation with the candidate. For further information and regulations, see “Graduate General Regulations” on page 243.

**Thesis**

The school encourages early submission of the thesis proposal which is circulated to faculty and resident graduate students, and formally presented for discussion at an open forum. A formal defence of the completed thesis is made to the examination committee at an open forum. The thesis proposal must precede the defence by at least four months. For further information and regulations, see “Graduate General Regulations” on page 243.

**Time Required for Degree**

Degree requirements can normally be completed in six terms.

**MSc Program (Course Work)**

**Degree Requirements**

The MSc Program by Course Work requires the completion of 30 credit hours of graduate courses in the school of kinesiology.

All students must take the following two courses.

- KIN 801-3 Seminar on Research in Kinesiology
- KIN 802-3 Statistical Applications in Kinesiology Research

and three of

- KIN 810-3 Integrative Muscle Physiology
- KIN 812-3 Molecular and Cellular Cardiology
- KIN 821-3 Environmental and Exercise Physiology
- KIN 825-3 Motor Learning and Control
- KIN 840-3 Human Biomechanics
- KIN 850-3 Control Systems in Health and Disease
- KIN 861-3 Neuroscience
- KIN 870-3 Modeling of Physiological Systems

and four electives chosen from any KIN graduate courses, and any other graduate courses at Simon Fraser University or other universities with prior approval of the graduate program committee.

All students must also complete a one-term directed study project KIN 804. Students who do not complete their project in one term must enroll for KIN 809 (Project Completion) in all subsequent terms until the project is completed. No additional credit will be given for KIN 809.

**Time Required for Degree**

It may be possible to complete the MSc course work in one calendar year of full-time study. However, it is anticipated that normally six terms will be required for degree completion. The program can be undertaken by students who are also employed.

**Application Criteria for Transfer from MSc to PhD Program**

Students currently in the kinesiology master’s program may be considered for transfer to the PhD program. Such transfers will be infrequent and very selective. Normally, only students enrolled in their third through sixth terms may apply to transfer to the PhD program. The graduate program committee (GPC) reviews such applications, and the GPC chair forwards a recommendation to the dean of graduate studies. The decision is made by the dean of graduate studies.

In addition to section 1.3.4 of the graduate general regulations, eligibility and the decision regarding transfer to the PhD in kinesiology will include the following criteria.

- strong support letters from the senior supervisor and at least one other academic referee
- excellent academic performance (e.g. minimum GPA of 3.67)
- strong background in research design and statistics or modeling as appropriate to the area
- completion of kinesiology graduate seminar course
- evidence that the student is capable of completing and disseminating research. Such capability will be judged by research to date, publications and letters from referees.

**PhD Program**

**Degree Requirements**

Students are admitted to the program in an area defined and determined prior to acceptance by the school’s graduate program committee. The program must be within the student’s and the school’s capabilities. Students must show competence in methodology relevant to proposed research.

Normally the supervisory committee will prescribe courses necessary to complete the student’s academic preparation. In exceptional circumstances, the supervisory committee may allow the student to proceed without additional course work over and above that for a master’s degree.

Study and research is designed to suit the background and research objectives of each student and may differ widely from student to student.

The student will present two school seminars on topics approved by the student’s senior supervisor, of which one should be directly related to the student’s thesis research. At least one of the seminars should be presented as a school seminar. The graduate program committee encourages students to participate in appropriate scientific meetings and conferences. As such, approval of a formal conference presentation, in lieu of one of the school seminars, will typically be granted.

**Comprehensive Examinations**

The comprehensive exam will normally consist of a research proposal, and a related oral and written exam.

The research proposal will be written in the format of either an NSERC Discovery Grant application, or a CIHR Operating Grant application, with an eleven page limit exclusive of budget, references, appendices, figures and tables. The proposal is to be written independently by the candidate, and should be written in enough detail to determine that the research is feasible and sufficient for PhD level research. The associated closed-book written examination will consist of questions structured to examine the candidate’s knowledge of the proposed research area and to determine whether he/she is capable of carrying out the proposed research. The questions may cover areas such as: fundamental knowledge, theoretical ideas or models, methodology, analysis and interpretation of results.

The oral examination is designed to further assess the candidate’s ability to understand the issues, and their ability to undertake the proposed research. It will consist of a 20-30 minute presentation of the candidate’s research proposal to an open forum, followed by a closed session. At the oral examination, the examiners may ask the student to clarify or elaborate the answers to the written exam questions and may further explore the student’s knowledge in any area relevant to the proposed research.

PhD students should normally complete both their comprehensive exams within the first six terms of PhD program enrolment. The examining committee will include the senior supervisor who, in consultation with the candidate, will nominate the other examining committee members, subject to the approval of the graduate program committee. Normally, this will consist of at least: one other member of the student’s supervisory committee who is an SFU kinesiology faculty member and is also a faculty member external to the school as external examiner, who may be a member of the student’s supervisory committee. The graduate program committee chair or designate will chair the committee.

**Dissertation**

**Dissertation Proposal**

Upon successful completion of the comprehensive examinations, the candidate prepares a dissertation proposal, which is circulated to faculty and resident graduate students, and will formally present this proposal for discussion at a school open forum. The proposal must precede the dissertation defence by at least one year.

**Completed Dissertation**

The completed dissertation is judged by the candidate’s examining committee. If the dissertation defence is failed, the candidate is ineligible for further candidacy in the degree program at this University.

For information and regulations, refer to the “Graduate General Regulations” on page 243.
School of Resource and Environmental Management

8405 Technology and Science Complex 1, 778.782.4659 Tel, 778.782.4988 Fax, www.rem.sfu.ca

Directors
K. Lertzman BSc (Manit), MSc, PhD (Br Col)

Professors Emeriti
J.C. Day BS, MSc (WOMT), PhD (Chic)
J.L. Knetzsch BS, MS (Mich State), MPA, PhD (Harv)

Professors
A.M. Gill BA (Hull), MA (Alta), PhD (Manit) – tourism and community development*
F. Gobas BSc, MSc (Amst), PhD (Tor) – environmental chemistry and toxicology, environmental fate modelling
T.I. Gunton BA, MA (Wat), PhD (Br Col) – regional resource and development planning
M. Jaccard BA, MRM (S Fraser), PhD (Grenoble) – resource and environmental economics with primary research interests in the field of energy and sustainable economies
K. Lertzman BSc (Manit), MSc, PhD (Br Col) – forest ecology, long term forest dynamics, landscape ecology, conservation biology, global change
R.M. Peterman BSc (Calif), PhD (Br Col), Canada Research Chair – fish population dynamics and management, simulation modelling, risk assessment, decision analysis
P.W. Williams BA (Ott), MA (Wat), PhD (Utah State) – policy, planning and management issues in tourism and outdoor recreation

Associate Professors
W. Haider MSc (Vienna), MA (Car), PhD (McG) – parks and outdoor recreation, human dimensions in resource management, choice modelling, social decision support systems
D. Knowler BA, MA (Alta) PhD (York, UK) – ecological economics, bioeconomic modelling, natural resource management in developing countries, valuation of environmental resources
E. Pinkerton BA (Wellesley), MAT (Harv), MA (Middlebury), PhD (Brandeis) – maritime anthropology, common property theory, community roles in management of adjacent renewable resources
J.R. Welch AB (Hamilton), MA, PhD (Arizona) – cultural resource management, resource planning and policy, and traditional cultural values, systems of land use, and ecological knowledge**

Assistant Professors
S. Cox BSc (Massachusetts, Lowell), MSc, PhD (Br Col) – fish stock assessment, conservation and multi-species management of recreational and marine fisheries, human dynamics
K. Kohfeld BSc (Brown), MPhil, PhD (Col) – physical processes of the earth system, global change
K. Rothley BS (MIT), MBA, ME (Cornell), PhD (Yale) – conservation biology, behavioral ecology, design of protected areas, GIS
M. Rutherford BSc, LLB (Br Col), MRM (S Fraser), MPhil, PhD (Yale) – environmental policy and planning, ecosystem-based management, policy evaluation and learning, environmental law

Adjunct Faculty
D. Alexander BA (Mich), MA (Trent), PhD (Wat), research consultant (regional planning, community economic development)
T. Berry BSc (Sask), MRM (S Fraser) – Principal, Compass Resource Management Ltd. (resource and environmental economics, sustainability analysis, electricity market reform, multi-criteria decision analysis)
D. Boyd BComm (Alta), BLaw (Tor), MA (McG) – Senior Associate, Faculty of Law, University of Victoria (environmental law)
M.J. Bradford BSc, MSc (S Fraser), PhD (McG) – research scientist Department of Fisheries and Oceans (water flow effects on chinook salmon)
F. Bunnell BSF (Br Col), PhD (Calif) – professor, Faculty of Forestry, University of British Columbia
A. deBroyun BSc, MSc (Vic, BC), PhD (McG) – NSERC postdoctoral fellow
A. fall BSc, PhD (S Fraser) – research consultant working on landscape ecology, spatially explicit simulation, natural resource models and sustainable forest management
J. fall BSc (Vic, BC), MRM (S Fraser), instructor, Capilano College
M-J Fortin BSc, MSc (Montr), PhD (NY State) – Department of Zoology, University of Toronto (landscape ecology)
S. Hanna BSc (Vic, BC), MRM (S Fraser), senior environmental specialist, Acres International (environmental and socioeconomic impact assessment, water resource management and environmental auditing)
H. Harker BSc (US Merchant Marine Acad), MSc (Alaska), PhD (Wat) – Community Planning Services Director, Red Deer Country, Red Deer, Alberta
E. Heyerdahl BSc (Ore), MSc, PhD (Wash), Research Forester, USDA Forest Service (dendochronology, fire ecology and the analysis of historical fire regimes)
R. Hoos BSc (Calig), MSc, PhD (S Fraser, BC) – Director of Northern Affairs, Polar Gas, Calgary (environmental impact assessment)
L. Hunt BA, MA, PhD (Wat), PhD geography and environmental studies candidate (Wat)
M. Ikonomou BSc (Trent), MSc, PhD (Alta) – research scientist, Department of Fisheries and Oceans (ecosystem modelling, contaminant assessment)
K. Jolliff BA, MA (Br Col), PhD (S Fraser) – sustainable tourism development
M. Kent BA (S Fraser), MSc (Alta) – Director, Highway Environment, BC Ministry of Transportation and Highways
N. Knight BSc, MRM (S Fraser), PhD (McG) – environmental assessment
K. Kyojima BSc, MSc (S Fraser), PhD (Phil Community and Reg Planning (Br Col)
W. Kurz DipHolzWirt (Hamburg), PhD (Br Col) – forest ecology and management, global carbon budgets
P. Lee BSc (S Fraser), MSc (Prim), PhD (S Fraser) – environmental specialist, Parks Canada, Vancouver (ecological integrity)
J.S. Macdonald BSc (S Fraser), PhD (WOMT) – fisheries scientist, Department of Fisheries and Oceans (ecosystems processes in watersheds, toxicology and habitat science)
E. MacIsaac BSc (Br Col) – Head, Fish-Forest Research Program, Department of Fisheries and Oceans
A. MacKinnon BSc, MSc (Br Col), Manager, Forest Ecology, BC Ministry of Forests (forest ecology)
M. Marramore BSc (Sask), MSc (Br Col) – Director and partner, Environmental and Social Systems Analysts Ltd. (ESSA), Vancouver (adaptive environmental assessment and management; ecological impacts of acid deposition)
D.W.I. Marshall BSc (Qu) – Program Director, Fraser Basin Management Program (environmental and social impact assessment)
J. Morrison BEd, MEd (Vic, BC), MBA (S Fraser) – Management Consultant
A. Murray BSc (EnvStu) (Wat), MSc (Cant) – Vice-President, Community and Environmental Affairs, Vancouver International Airport Authority (environmental, impact assessment, environmental management systems, sustainable development, conflict resolution, community involvement)
J. Nyboer BSc (Alta), BEd (Tor), MRM, PhD (S Fraser) – Executive Director, Canadian Industry Energy End-Use Data and Analysis Centre (CIEEDAC) and Energy Research Group (ERG) (energy system modelling, industrial energy use analysis, energy efficiency analysis, technology assessment)
M. Pellat BSc, PhD (S Fraser) – Coastal Ecologist, Parks Canada (coastal ecology, paleoecology)
R. Porges ABD (Br Col), BA, MSc (S Fraser) – director, research services, Tourism British Columbia
P. Ross BSc (Trent), MSc (Dal), PhD (Utrecht) – environmental contaminants in marine mammals, modelling contaminants in the eco-system
K. Tiedemann BA (Alta) – manager, DSM – Associate Consultant, Habart & Associates Consulting Inc.
M. Weinstein BSc, PhD (McG) – marine biologist, aquatic resources coordinator for Namgis First Nation, Alert Bay, British Columbia
L. Wolfe BSc (Ore) MSc, MBA (Br Col), PhD (S Fraser) Principal, Quadra Planning Consultants Ltd; Larry Wolfe Associates
C. Wood BSc (S Fraser), PhD (Br Col) – Head, Conservation Biology Section, Department of Fisheries and Oceans

Affiliated Faculty
M.A. Harestad, Biological Sciences
R. Rosland, Geography
R. Routledge, Environmental Studies
M. Schmidt, Geography

The School of Resource and Environmental Management offers two interdisciplinary graduate degrees. The master's program culminates in either a Master of Resource Management degree, or a Master of Resource Management (Planning) degree. In addition, there is a doctoral program leading to a Doctor of Philosophy degree.

These programs are designed for recent graduates from a range of disciplines, and for individuals with experience in private organizations or public agencies dealing with natural resources and the environment. Relevant disciplines of undergraduate training or experience include fields such as biology, engineering, chemistry, forestry and geology, as well as business administration, economics, geography, urban planning and a variety of social sciences. The programs provide training for professional careers in private or public organizations and preparation for further training for research and academic careers. An optional co-operative education program permits students to work in a private organization or a resource management agency to gain first hand experience.

Co-operative Education

This program places students in a government or private resource or environmental management agency to gain professional experience in applied problem solving. This optional program can lead to work that is directly applicable to REM 699.

Centres and Institutes

Centre for Tourism Policy and Research

The school plays a leading role in the operation of Simon Fraser University's Centre for Tourism Policy and Research. The centre undertakes research, offers professional development seminars and workshops, and conducts planning and marketing research projects for public and private sector tourism organizations.
Co-operative Resource Management Institute
REM faculty play an active role in this institute, a unit on the Burnaby Mountain campus that houses natural resources management agencies. The institute can facilitate solutions to difficult multidisciplinary issues in resource management by providing an environment where personnel from different management agencies such as forestry, fisheries and wildlife can work side-by-side with Simon Fraser University faculty, graduate students, post-doctoral fellows and research associates on a daily basis. The university benefits from greater concentration of expertise in resource management and from new opportunities for multidisciplinary, collaborative research programs.

Requirements
A mandatory non-credit one day orientation workshop for all new diploma program students will give an overview of how the various courses mentioned below will help students meet challenging issues in fisheries science and management. The workshop will also initiate dialogue between diploma students (who will bring significant work experience to class discussions), faculty and fisheries graduate students.

Required Courses
Students must complete a minimum of 22 credit hours composed of the following courses. It is preferable that students take the first four courses in the following order.
REM 613-5 Methods in Fisheries Assessment
STAT 650-5 Quantitative Analysis in Resource Management and Field Biology
REM 661-5 Special Topics in Resources Management
REM 663-5 Special Topics in Resource Management

Master's Program
Students who successfully complete this program will be awarded the degree of Master of Resource Management.

Required Courses
Students must complete seven required courses (see below), six graduate elective courses and a research project (REM 699). A minimum of 69 credit hours is required to complete the degree, consisting of 43 required credit hours and 26 elective credit hours. In exceptional cases, if a student provides evidence of advanced education that is equivalent to one of the required courses, a waiver may be granted for that course, thereby reducing the required courses to six.

Prerequisite Courses
All students must be familiar with the material covered in an undergraduate course in parametric and nonparametric statistical techniques.

Elective Courses
To fulfil the six elective courses requirement, students generally choose those that support and complement their particular research interests. Students may, in consultation with their senior supervisor, select REM courses and/or courses from other departments.

Planning Stream
Students who successfully complete this planning stream will be awarded the Master of Resource Management (Planning) degree.

Admission Requirements
Refer to the “Graduate General Regulations” on page 243 for admission requirements. Contact the School of Resource and Environmental Management directly for an application package (reminfo@sfu.ca). Those with degree qualifications in fields not directly related but with extensive experience in resource management are encouraged to apply. Individuals will vary in their preparation for the various disciplines in the school. Therefore, admission to the school might be conditional upon the completion of certain undergraduate courses.

Application deadline: February 1.

Graduate Diploma in Quantitative Methods in Fisheries Management
This interdisciplinary program provides an opportunity to study the latest quantitative methods in fisheries management. The program is aimed at those with a background in fisheries science and management, as well as those who would simply like to learn more about this field. It provides a strong foundation in the quantitative tools that are necessary for doing fish stock assessment and providing scientific advice in support of fisheries management decisions. It will also provide professionals working in the field with an opportunity to upgrade their skills in the increasingly important areas of statistics, simulation modelling and analyses of uncertainties and risks. The program emphasizes both the theory and the application of these methods to real world situations.

Application and Admission
Applicants are normally required to hold an undergraduate degree in one of the natural or applied sciences with a minimum 3.0 CGPA or a B grade. Applications from students with other degrees or with equivalent professional training and experience will also be considered.

Applicants must submit the following documentation to the graduate secretary of the school.
- online application for graduate admission, instructions available from the Dean of Graduate Studies office’s web site at www.sfu.ca/dean-gradstudies/forms.htm;
- official copy of transcript of undergraduate and graduate grades (mailed directly from the granting institution);
- three confidential letters of reference (mailed directly from the referees);
- a one page statement of student interest;
- TOEFL and TWE test scores may be required for applicants whose first language is not English.
- resume
- REM checklist

Requirements
A mandatory non-credit one day orientation workshop for all new diploma program students will give an overview of how the various courses mentioned below will help students meet challenging issues in fisheries science and management. The workshop will also initiate dialogue between diploma students (who will bring significant work experience to class discussions), faculty and fisheries graduate students.

Required Courses
Students must complete a minimum of 22 credit hours composed of the following courses. It is preferable that students take the first four courses in the following order.
REM 613-5 Methods in Fisheries Assessment
STAT 650-5 Quantitative Analysis in Resource Management and Field Biology
REM 661-5 Special Topics in Resources Management
REM 663-5 Special Topics in Resource Management

Master’s Program
Students who successfully complete this program will be awarded the degree of Master of Resource Management.

Required Courses
Students must complete seven required courses (see below), six graduate elective courses and a research project (REM 699). A minimum of 69 credit hours is required to complete the degree, consisting of 43 required credit hours and 26 elective credit hours. In exceptional cases, if a student provides evidence of advanced education that is equivalent to one of the required courses, a waiver may be granted for that course, thereby reducing the required courses to six.

Prerequisite Courses
All students must be familiar with the material covered in an undergraduate course in parametric and nonparametric statistical techniques.

Elective Courses
To fulfil the six elective courses requirement, students generally choose those that support and complement their particular research interests. Students may, in consultation with their senior supervisor, select REM courses and/or courses from other departments.

Planning Stream
Students who successfully complete this planning stream will be awarded the Master of Resource Management (Planning) degree.

Admission Requirements
Refer to the “Graduate General Regulations” on page 243 for admission requirements. Contact the School of Resource and Environmental Management directly for an application package (reminfo@sfu.ca). Those with degree qualifications in fields not directly related but with extensive experience in resource management are encouraged to apply. Individuals will vary in their preparation for the various disciplines in the school. Therefore, admission to the school might be conditional upon the completion of certain undergraduate courses.

Application deadline: February 1.

Graduate Diploma in Quantitative Methods in Fisheries Management
This interdisciplinary program provides an opportunity to study the latest quantitative methods in fisheries management. The program is aimed at those with a background in fisheries science and management, as well as those who would simply like to learn more about this field. It provides a strong foundation in the quantitative tools that are necessary for doing fish stock assessment and providing scientific advice in support of fisheries management decisions. It will also provide professionals working in the field with an opportunity to upgrade their skills in the increasingly important areas of statistics, simulation modelling and analyses of uncertainties and risks. The program emphasizes both the theory and the application of these methods to real world situations.

Application and Admission
Applicants are normally required to hold an undergraduate degree in one of the natural or applied sciences with a minimum 3.0 CGPA or a B grade. Applications from students with other degrees or with equivalent professional training and experience will also be considered.

Applicants must submit the following documentation to the graduate secretary of the school.
- online application for graduate admission, instructions available from the Dean of Graduate Studies office’s web site at www.sfu.ca/dean-gradstudies/forms.htm;
- official copy of transcript of undergraduate and graduate grades (mailed directly from the granting institution);
- three confidential letters of reference (mailed directly from the referees);
- a one page statement of student interest;
- TOEFL and TWE test scores may be required for applicants whose first language is not English.
- resume
- REM checklist

Requirements
A mandatory non-credit one day orientation workshop for all new diploma program students will give an overview of how the various courses mentioned below will help students meet challenging issues in fisheries science and management. The workshop will also initiate dialogue between diploma students (who will bring significant work experience to class discussions), faculty and fisheries graduate students.

Required Courses
Students must complete a minimum of 22 credit hours composed of the following courses. It is preferable that students take the first four courses in the following order.
REM 613-5 Methods in Fisheries Assessment
STAT 650-5 Quantitative Analysis in Resource Management and Field Biology
REM 661-5 Special Topics in Resources Management
REM 663-5 Special Topics in Resource Management

Master’s Program
Students who successfully complete this program will be awarded the degree of Master of Resource Management.

Required Courses
Students must complete seven required courses (see below), six graduate elective courses and a research project (REM 699). A minimum of 69 credit hours is required to complete the degree, consisting of 43 required credit hours and 26 elective credit hours. In exceptional cases, if a student provides evidence of advanced education that is equivalent to one of the required courses, a waiver may be granted for that course, thereby reducing the required courses to six.

Prerequisite Courses
All students must be familiar with the material covered in an undergraduate course in parametric and nonparametric statistical techniques.

Elective Courses
To fulfil the six elective courses requirement, students generally choose those that support and complement their particular research interests. Students may, in consultation with their senior supervisor, select REM courses and/or courses from other departments.
Doctoral Program

Admission Requirements
To qualify for admission, an applicant must satisfy all university admission requirements as outlined in the graduate general regulations. Applicants must have:

- the ability to carry out innovative, independent and original PhD level research in that field
- high academic standing in previous university work
- a master's degree in a related discipline

All applicants must submit the following with their application:

- all university transcripts
- a short curriculum vitae providing evidence of awards, academic performance, publications and relevant research and work experience
- a 500-1,000 word statement of interest describing how this program fits into the applicant’s research and career objectives
- three letters of reference (using the form provided in the application package) from respected academics/researchers who have first-hand knowledge of the applicant’s research capabilities and academic training
- results from the GRE Test and
- official results of the TOEFL and TWE or IELTS exams (for applicants whose first language is not English and whose previous education has been conducted in another language)

Applicants must be accepted by an identified senior supervisor prior to admittance. PhD applicants are strongly advised to visit the University for an interview prior to February 1 of the year of requested admission. See “1.3.4 Admission to a Doctoral Program” on page 244.

Transfer from the Master's Program to the PhD Program

An MRM student who shows exceptional ability may apply to transfer to the PhD program only if the student has the ability to carry out innovative, independent and original PhD level research in that field, and has obtained high academic standing in previous university work. All university regulations governing transfers must be met. Transfers are only permitted when the student has been in the master's program for two but not more than four terms.

Transfer applications must be approved by the student's supervisory committee, the REM graduate studies committee, and the senate graduate studies committee. Transfer students will be eligible to earn only the PhD degree.

Degree Requirements

Courses

All REM PhD students must complete and maintain an A- average in

- REM 611-5 Population and Community Ecology
- REM 621 Ecological Economics
- REM 699-3 Field Resource Management Workshop
- REM 802-5 Research Approaches for REM PhD Students

and one of

- REM 602-5 Natural Resource Management II: Advanced Seminar
- REM 642-5 Regional Planning I
- REM 644-5 Public Policy Analysis and Administration

The student's supervisory committee may recommend that the student completes elective courses in addition to the required courses in order to strengthen the student's background in areas directly related to their thesis research. Elective courses may be taken outside REM, if approved by the student's supervisory committee.

Students who transferred from the REM master's program into the REM PhD program may obtain a course waiver for REM611, 621, 642/644/602, and 698 if they have received credit for these courses within five years of their commencement of the PhD program and maintained an A- average in them. If a student receives a course waiver, the student is not required to replace the course for which the waiver was received with another course.

Comprehensive Examinations

To complete the PhD degree the student must pass the REM PhD comprehensive examination that examines the candidate's knowledge and abilities in disciplinary areas that are different from but related to the student’s thesis research. The comprehensive examination includes three disciplinary areas, i.e.

- environmental sciences
- policy and planning in resource and environmental management
- natural resource and environmental economics

To complete the comprehensive examination, the student must prepare a written thesis proposal which addresses issues in these three areas. The proposal should demonstrate that the candidate's research abilities are adequate for PhD level research and to determine if the proposed research is feasible and has merit. The student must pass the thesis proposal defence to remain in the program.

Thesis

A written thesis based on the candidate's original research in resource and environmental science and management is the final PhD program requirement and must include aspects of at least two disciplinary areas (such as ecology and policy, or toxicology and law). The topic must be approved as noted above and the student's progress will be evaluated annually in accordance with the graduate general regulations.

When the thesis is essentially complete, the student must first present it to a departmental colloquium prior to proceeding to the formal thesis defence. This presentation shall form the basis of the supervisory committee's recommendation about defence readiness. All PhD candidates must then pass the formal thesis defence, which is conducted in accordance with University regulations. All other PhD general requirements are as outlined in the graduate general regulations.

Residence Requirement

A PhD candidate must be enrolled and in residence at Simon Fraser University for the minimum number of terms as described in the “Graduate General Regulations” on page 243.

Simon Fraser University 2007 - 2008 Calendar
Faculty of Arts and Social Sciences

6168 Academic Quadrangle, 778.782.4414 Tel, 778.782.3033 Fax, www.sfu.ca/arts

Dean
L. Cormack BC (Calg), MA, PhD (Tor)

Associate Deans
H. Dawkins BFA (Nova Scotia Art & Des), MA, PhD (Leeds)
A.M. Gill BA (Hull), MA (Alta), PhD (Manit)
M.A. Gilles BA (Alta), MPhil, PhD (Oxf)
T.A. Perry BA (Wabash), MA, PhD (Indiana)

Assistant Dean
V.G. Rose BA (S Fraser), MBA (Tor)

Graduate Diploma Offered
Graduate Diploma in Urban Studies

Graduate Degrees Offered
Master of Arts
Master of Arts in Liberal Studies
Master of Fine Arts
Master of Public Policy
Master of Publishing
Master of Urban Studies
Doctor of Philosophy

General Regulations
See “Graduate General Regulations” on page 243 for admission requirements, enrollment, residence requirements and time limit for completion of degrees.

Master of Arts Co-operative Education Program
Master of Arts students in good standing with a minimum grade point average of 3.0 may apply to enter the co-op education program after satisfactory completion of courses as approved by the academic program in which they are completing their MA. Work term arrangements are made through the Faculty of Arts and Social Sciences co-op coordinator at least one term in advance. For details, see “Co-operative Education” on page 237.

Department of Archaeology
9635 Education Building, 778.782.4727 Tel, 778.782.5666 Fax, www.sfu.ca/archaeology

Chair
D.V. Burley BA, MA (New Br), PhD (S Fraser)

Graduate Program Chair
A.C. D’Andrea BSc (Tor), MSc (Lond), PhD (Tor)

Faculty and Areas of Research
See “Department of Archaeology” on page 133 for a complete list of faculty.

D.V. Burley – historical archaeology, cultural resource management, theory, northwest North America, South Pacific
R.L. Carlson – archaeology and ethnology North America, particularly Northwest Coast, Southwest, material culture, and early peoples of the New World, museology, primitive art
M. Collard – biological anthropology, human evolution, primate evolution, evolutionary archaeology, phylogenetics, systematics and taxonomy
A.C. D’Andrea – paleoethnobotany, bioarchaeology, early agriculture, ethnoarchaeology, subsistence, East Asia, Africa
J.C. Driver – zooarchaeology, cultural ecology, Western Canada, American Southwest
K.R. Fladmark – northwest North America, geoarchaeology, paleoindian, Quaternary studies, Canadian prehistory, native cultures of North America
B.M.F. Galdikas – primate behavior, orangutan research and conservation
B.D. Hayden – lithics, ethnoarchaeology, Northwest Interior, Southeast Asia, hunter/gatherers, cultural ecology, method and theory
R.W. Jamieson – historical archaeology, Spanish colonialism, domestic architecture, material culture, ethnohistory, Andean South America
D. Lepofsky – Northwest Pacific, Oceania, cultural ecology, paleoethnobotany, households, prehistoric land use
D.E. Nelson –archaeometric methods, stable isotope analysis, radiocarbon dating by accelerator mass spectrometry
G.P. Nicholas – northeast North America and Plateau, hunter/gatherers, cultural ecology, indigenous peoples and archaeology, wetlands, Quaternary studies
A.G. Ross – art history, artistic and oral traditions, First Nations craft, indigenous environmental practice, studio art practice
R. Shuter Jr. – paleoanthropology of East and Southwest Asia and Japan, prehistory Oceania, paleoindian New World
M.F. Skinner – physical anthropology, skeletal biology, forensic anthropology, paleoanthropology, paleopathology
J.R. Welch* – cultural heritage stewardship, Apache ethnohistory, archaeology and ethnology of the American Southwest, resource management practice and policy
D. Yang – physical anthropology, ancient DNA, DNA diagnosis of diseases from ancient remains, molecular forensic anthropology, molecular archaeology, North America, East Asia, Europe
E.C. Yellowhorn* – plains and fur trade archaeology, oral history, traditional knowledge, ethno-sciences, archaeoastronomy, indigenous archaeology

Adjunct Faculty
J.P. Delgado – historical archaeology, paleoethnobotany, museology
R.A. Lazenby – biological and forensic anthropology
A.D. McMillan – archaeology and ethnology of Canada, particularly Northwest coast, native arts
M.C. Wilson – geoarchaeology, zooarchaeology, ethnoarchaeology, human use/construction of landscape, Western Canada, North American Plains, China, West Africa

Associate Members
For areas of research, refer to the department listed.
J.J. Clague, Earth Sciences
D.J. Huntley, Physics
R.W. Mathews, Biological Sciences

*joint appointment with resource and environmental management
**joint appointment with First Nations studies

Areas of Study
The department offers specialization in archaeometry, art, ceramic analysis, cultural resource management, ethnoarchaeology, forensic anthropology, archaeological analysis, cultural history, and tradition. Students complete a minimum of three graduate courses including ARCH 871 and 876, and a thesis. They are required to take additional courses and must take ARCH 872/873 each term that it is offered. ARCH 873 credit is not part of the normal MA requirement. ARCH 872 and 873 grading will be satisfactory/unsatisfactory (S/U). Course requirements, thesis prospectus and colloquium presentation should be completed by full-time students by the end of the second term.

Advancement to Candidacy
Advancement to candidacy requirements follow.
• completion of two of the minimum three graduate courses.
• preparation of thesis prospectus. The prospectus discusses the proposed research and general background relevant to the research and is submitted to the supervisory committee and approved before step 3 is undertaken.
• after approval of the thesis prospectus, and after consultation between the student and his/her supervisory committee, the student will present a colloquium, the topic of which shall be the substance of the prospectus.

Thesis
The thesis is the student's own research, and should be the thesis itself and related matters. It should be focussed on problem-oriented research, involving the conceptualization of a problem, and the collection, analysis and interpretation of data. It should not normally exceed 100 pages of text. Students are expected to complete the MA thesis in a maximum of six terms of full-time enrollment.

PhD Program
This program consists of these sequential steps: course requirements, comprehensive exam, thesis
prospectus, colloquium presentation, advancement to candidacy, thesis completion and defence.

**Course Requirements**

Course requirements are determined in consultation with the supervisory committee. In addition to the comprehensive exam and thesis, normal course requirements consist of a minimum of three graduate courses including ARCH 871 and 876. Students may be required to take additional courses and are must complete ARCH 872/873 each term that the course is offered. ARCH 873 credit does not constitute part of the normal course requirements. Grading for ARCH 872/873 courses will be restricted to satisfactory/unsatisfactory (S/U).

**Comprehensive Exam**

Students write a comprehensive examination prior to candidacy to test general knowledge in archaeology and in three regional or topical areas. Grading is on a pass/fail basis but the examination or parts thereof may be repeated once, at the department's discretion.

**Advancement to Candidacy**

Formal advancement to candidacy shall take place when the following have been completed:

- completion of two of the minimum three graduate courses and successful performance in the comprehensive exam
- preparation of thesis prospectus. The purpose of the prospectus shall be to discuss the proposed research and general background relevant to the research. The prospectus is expected to be submitted to the supervisory committee and approved before step 3 is taken.
- after approval of the thesis prospectus, and after consultation between the student and his/her supervisory committee, the student will present a colloquium, the topic of which shall be the substance of the prospectus.

The colloquium is not considered a defence of the prospectus, but a means whereby students may benefit from the department's collective expertise.

**Thesis**

After the above, students advance to candidacy, and complete and defend the thesis. The defence topic should be the thesis itself and related matters. The thesis should represent original, problem-oriented research which makes a significant contribution to knowledge.

**Language Requirement**

A knowledge of a language other than English is desirable, but there are no prescribed language requirements. However, if knowledge of a language is necessary for the field work or reading, he/she will be required to attain the necessary language proficiency.

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**School for the Contemporary Arts**

Room 601C SCA, 778.782.3724 Tel, 778.782.5907 Fax, www.sfu.ca/scac, mfangard@sfu.ca

**Director**

M.S. Gotfrit BA (C’dia), MA (McG) – music

**Interim Program Chair**

L. Marks BA (Swarthmore), MA, PhD (Roch)

**Faculty and Areas of Research**

See "School for the Contemporary Arts" on page 139 for a complete list of faculty.

C.V.A. Browne – documentary and innovative film production, poetry, fiction, screenplay, poetic, interdisciplinary performance

A. Clay – drawing, painting, text work, installation, contemporary feminist and critical theories

H. Daniel – performance and new technologies

H. Dawkins – social history of 19th century visual art, women's history, feminist, psychoanalytic and cultural theory

A. Eigenfeld – music for dance, MIDI systems, digital signal processing

M. Eist – ballet, modern dance, body therapies, choreography, dance education, dance history

J. Garay – choreography, performance, costume design

M.S. Gotfrit – electroacoustic music, film-sound design and scoring

P. Gruben – directing, scriptwriting, editing; dramatic and experimental narrative

S. Hill – theatre performance, directing, devising, interdisciplinary collaboration

R. Kitsos – choreography, performance, combining new technologies and performance

D.D. Kugler – directing, dramaturgy, play-making

J. Levitin** – film production and theory, independent film making, feminist film criticism, ideological studies, third world film, comedy, directing, women's studies

D.K. Maclntyre – music composition, interdisciplinary composition and performance, collaboration

L. Marks – experimental and electronic media, non-Western approaches to media technologies, representation of the senses, and Arab and African cinema

D. Oleksijczuk – images and objects produced in Britain and Canada, intercultural and global approaches to the history of art, contemporary art and visual culture

J. Radul – performance, video, photography, sound and text, contemporary theory

G. Snider – sculpture, installation, public art, contemporary art theory

P. Stella – acting, directing, playmaking, dramaturgy

B.D. Truax** – acoustic communication, electroacoustic music and computer music (composition and software development), world soundscape studies

Q. Underhill – composition, conducting, contemporary ensembles, music theatre, interdisciplinary collaboration, 20th century theory

C. Welsby – avant garde film and video making, photography and time-based gallery installations

J. Yoon – photo and video based installation, image and text, art in the public realm, contemporary theory

R. Kitsos – choreography, performance, combining new technologies and performance

J. Yoon – photo and video based installation, image and text, contemporary art and visual culture

R. Kitsos – choreography, performance, combining new technologies and performance

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**MFA Program**

The program, leading to a master of fine arts (MFA) in interdisciplinary studies, provides advanced training in music, dance, theatre, film, and visual arts. It furthers cross-disciplinary research, technical skill and artistic creativity, and the development of critical awareness of the relatedness of the arts both in contemporary society and in an historical perspective.

The MFA degree is the standard qualifying degree for teaching at the post secondary level. Courses provide flexibility to accommodate individual differences in background and artistic goals, with emphasis throughout the production of creative work in an interdisciplinary context. The program is full time and two years in duration. It cannot be pursued part-time and has a residency requirement due to the nature of the artistic practice.

**Admission Requirements**

Applicants must hold a BFA, BA, BMus or BEd in one or more of the art disciplines, with a 3.0 CGPA or better. In special cases, a candidate may be admitted who does not satisfy this requirement but who either possesses comparable certification (an art school or conservatory diploma) or has exceptional experience as a practising artist.

Applicants must demonstrate creative competence with a high standing in music, dance, theatre, film, or visual art undergraduate courses, or substantial experience in these fields outside the university. For consideration by the admissions committee, applicants submit a work portfolio of audio or video tapes, scores, slides, films, plays or academic papers. Performing artists may be asked to audition.

Foreign students may be required to demonstrate proficiency in the English language, attained by scoring 570 or above in the Test of English as a Foreign Language.

**Degree Requirements**

MFA candidates complete a minimum of 35 credit hours, including 25 of course work and a project, which is the equivalent of 10 credit hours. Normally, this project is an art presentation accompanied by appropriate documentation with an oral defence.

Students must complete all of FPA 811-5 Interdisciplinary Graduate Seminar I

FPA 812-5 Interdisciplinary Graduate Seminar II

FPA 813-5 Interdisciplinary Graduate Studio

FPA 898-10 Master of Fine Arts Graduating Project

FPA 883-5 Studio in Fine and Performing Arts I

FPA 885-5 Studio in Fine and Performing Arts II

FPA 887-5 Selected Topics in Fine and Performing Arts

FPA 889-5 Directed Study in Fine and Performing Arts

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**School of Criminology**

10128 Arts and Social Sciences Complex, 778.782.4762/3213 Tel, 778.782.4140 Fax, yanciw@sfu.ca, crimgrad@sfu.ca, www.sfu.ca/criminology

**Director**

R.M. Gordon BA (La Trobe), MA (S Fraser), PhD (Br Col)

**Graduate Program Director**

N. Boyd BA (WOnt), LLB, LLM (Law Soc Upper Canada)

**Faculty and Areas of Research**

See "School of Criminology" on page 146 for a complete list of faculty.

G.S. Anderson – forensic, medical and veterinary entomology

E.O. Boyanovsky – community standards and the law, environment, emotion and behavior, media and crime, group behavior, police, gangs and juries

N.T. Boyd – critical analysis of Canadian criminal law, homicide, Canadian narcotics legislation, legal control of pornography

P.J. Brantingham – environmental and historical criminology

P.L. Brantingham – environmental criminology, crime prevention through environmental design, criminal justice planning, policy evaluations

J. Brockman – self regulation, crimes and misconduct in the professions, white collar and corporate crime, financial crimes, criminal procedure and evidence, the use of social science research as evidence in court, feminist jurisprudence, methodology and perspectives, women in the professions

B. Burtch – penology, corrections, sociology of law, social control, reproduction and law, state theory, electronic monitoring of offenders

R.R. Corrado – comparative juvenile justice, terrorism, evaluation research, administration of justice in Canada
Graduate programs focus on five major (core) areas:  
• the phenomena of crime  
• theories of crime  
• criminal justice policy analysis  
• methods  
• law and social control

Centre for Restorative Justice
See “Centre for Restorative Justice” on page 480.

Criminology Research Centre
See “Criminology Research Centre” on page 477.

Feminist Institute for Studies on Law and Society
See “Feminist Institute for Studies on Law and Society” on page 477.

Institute for Studies in Criminal Justice Policy

MA Program

Admission Requirements
Students holding a baccalaureate or equivalent from a recognized institution must meet the admission requirements for graduate studies. See “1.3.2 Admission to a Graduate Diploma Program” on page 243 and also see “1.3.8 Conditional Admission” on page 244.

Normally, an applicant should have completed at least one course in social science research methods and one undergraduate introductory course in statistics. Formal transcripts and a short statement of interest, which includes a description of previous employment and research or other relevant work, are required. Letters of recommendation from those who are familiar with the applicant’s work are required.

An application fee of $75 (Canadian) is paid online by charge card at time of application submission. The deadline for receipt of the online application and supporting documents, for entrance in the fall semester, is February 1. Applicants will be informed of the outcome as soon as possible thereafter.

Degree Requirements
The school offers MA degrees through two research options: a thesis option, and a course work, practicum and project option. Students elected which option to pursue in consultation with their senior supervisor.

Thesis Option
This option requires:  
• completion of a minimum of 18 credit hours of course work as specified below, and  
• satisfactory completion and oral defense of an original MA thesis

The course work requirement includes:  
CRIM 800-3 Theories of Crime  
CRIM 840-3 Proseminar  
CRIM 860-3 Research Methods I  
CRIM 862-3 Research Methods II  
CRIM 863-3 Research Methods III  
plus at least six credit hours selected from additional graduate curriculum course offerings.

The thesis will not normally be more than 100 pages in length, including bibliography and footnotes, but exclusive of appendices.

Course, Practicum and Project Option
This option requires:  
• completion of a minimum of 21 credit hours of course work as specified below, and  
• satisfactory completion of a supervised field practicum, and  
• satisfactory completion of a practicum related research project.

The course work requirement includes:  
CRIM 800-3 Theories of Crime  
CRIM 810-3 The Phenomena of Crime I  
CRIM 840-3 Proseminar  
CRIM 860-3 Research Methods I  
CRIM 869-3 Professionalism and Criminal Justice plus at least six credit hours selected from additional graduate curriculum course offerings.

The practicum is met by satisfactory completion of a supervised one-term field placement in a criminal justice related agency. The project requires a field research project related to the field placement, and a project report that is not normally more than 50 pages in length, including bibliography and footnotes, but exclusive of appendices.

Satisfactory Performance
The candidate’s progress is assessed at least twice a year by the school (spring and fall). A student who performs unsatisfactorily is not permitted to continue in the program, subject to the review procedures described in Graduate General Regulation 1.8.2.

PhD Program

Admission Requirements
The minimum admission requirements are stated in “1.3.4 Admission to a Doctoral Program” on page 244. Normally, an applicant should have at least one course in social science research methods and one undergraduate introductory statistics course. Direct admission may be approved for those with a criminology master’s, a master’s in a discipline other than criminology and professional experience. Those applying for admission to the PhD program must have at least two years of professional experience. Normally, an applicant should have at least one undergraduate introductory statistics course. Normally, an applicant should have at least one undergraduate introductory statistics course. Normally, an applicant should have at least one undergraduate introductory statistics course. Normally, an applicant should have at least one undergraduate introductory statistics course.

Applicants submit a research interests statement and at least two previous academic work examples. In exceptional circumstances, those with a BA (or equivalent) may be admitted if University regulations are met. Original undergraduate research is demonstrated, and the applicant is recommended for direct entry by at least two criminology faculty who are eligible to teach or supervise in the PhD program. Those who meet the GPA requirement and have demonstrated research ability through field criminal justice experience may also be considered on recommendation of at least two program faculty members. Those so admitted will have their status reviewed by the end of the second term after admission. The graduate program committee determines the candidate’s ability to complete the PhD by direct entry. The student will either be confirmed as an approved PhD candidate or directed to seek master’s program admission. Because many disciplines are allied to criminology, the graduate program committee reserves the right to determine equivalent courses already taken in the applicant’s master’s program. At the time of admission, the graduate program committee may waive up to 15 credit hours of requirements.

An application fee of $75 (Canadian) is paid online by charge card at time of application submission. The deadline for receipt of the online application and supporting documents, for entrance commencing in the fall semester, is February 1. Applicants will be
informed of the outcome as soon as possible thereafter.

Note: Although applicants with two prior degrees from the School of Criminology may be accepted into the PhD program, this is not considered a good practice.

Degree Requirements
PhD candidates must take a minimum of 33 credit hours consisting of
• at least three research methods courses (nine credit hours)
• theories of crime I (three credit hours)
• seminars in three credit hours
• at least 18 credit hours selected from additional curriculum offerings
• achieve satisfactory completion and oral defence of an original PhD thesis

A maximum of nine credit hours may be taken in another department or university with supervisory committee and graduate program committee approval. These courses may be accepted as partially meeting PhD program requirements.

All students write comprehensive exams in two of the five core curriculum areas. Normally, students are expected to finish courses and comprehensives within two years of program entry.

Note: While two of the course areas are entitled 'methods' and 'theory,' methodological and theoretical issues are relevant to all core areas.

Dissertation Procedures
In the term after comprehensive exams are passed, candidates develop a thesis prospectus based on original research defining the proposed investigation and demonstrates the relationship between it and existing scholarship. The thesis proposal is presented to the supervisory committee and, on approval, is circulated to faculty and resident graduate students and presented at a colloquium.

The thesis is defended in oral examination by an examining committee constituted under “1.9.3 Examining Committee for Doctoral Thesis” on page 248 in the Graduate General Regulations.

Satisfactory Performance
The progress of each candidate is assessed at least twice a year (spring and fall). Students who perform unsatisfactorily may not continue, subject to review procedures of unsatisfactory progress described in “1.8.2 Review of Unsatisfactory Progress” on page 247 of the Graduate General Regulations.

Department of Economics
3602 Diamond Building, 778.782.3562/3508 Tel, 778.782.5944 Fax, www.sfu.ca/economics
Chair
G.M. Myers BA (Qu), MA, PhD (McM)
Associate Chair
N. Schmitt Licence (Lausanne), MA (Car), PhD (Tor)
Graduate Program Chair
D. Andolfatto BBA, MA (S Fraser), PhD (WOnt)
Faculty and Areas of Research
See “Department of Economics” on page 151 for a complete list of faculty.

D.W. Allen – microeconomic theory, industrial organization
D. Andolfatto – dynamic general equilibrium theory, macroeconomics, labor markets, monetary theory
B. Antoine – econometrics, time series methods, financial econometrics
J. Arifovic – macroeconomics, monetary theory, learning and adaptation in economics
P. Curry – microeconomic theory, law and economics
G. Dow – microeconomic theory, theory of organization
G. Dunbar – macroeconomics, applied microeconomics
S. Easton – international trade, economic history
J. Friesen – labor economics
R. Gençay – time series methods, financial econometrics, computational economics
R.G. Harris – international economics, economic theory
D.S. Jacks – economic history, international trade and finance
R.A. Jones – monetary theory, macroeconomics, finance
A.K. Karaiwanov – development, mathematical economics, microeconomic theory
K. Kasa – macroeconomics, international economics
P.E. Kennedy – econometrics, economic education
A. Kessler – contract theory, public economics, labor
B. Krauth – macroeconomics, econometrics
P. Lavergne – economic theory, applied microeconomics
C. Lülfesmann – contract theory, industrial organization
F. Martin – macroeconomics, public finance, monetary theory
S. Mongrain – public finance, microeconomic theory
D. Monte – game theory, microeconomic theory
G.M. Myers – public and urban economics
N.D. Oleviler – natural resources, environmental economics
K. Pendakur – labor economics, public finance
C.G. Reed – economic history, applied microeconomics
M. Rekkas – economic policy, political economics, industrial organization
A.J. Robson – game theory, uncertainty, preferences for status, biological evolution of economic preference
N. Schmitt – international trade, theory, industrial organization
R.W. Schmidt* – industrial organization, international trade, public policy toward business
L. Visschers – macroeconomics, labor, frictional markets, applied theory
S.D. Woodcock – labor economics, econometric theory
J. Xu – international macroeconomics, monetary economics, macroeconomics

Joint appointment with business administration, home department is economics

MA Program
Admission Requirements
See “1.3 Admission” on page 243 for University admission requirements. As well, the department requires that the applicant must hold a bachelor's degree with honors in economics or business administration, or must complete additional work to that standard. Normally, the graduate admissions committee will specify the appropriate additional requirements at the time of admission.

Degree Requirements
The MA program has four options. Under each, ECON 798 is required in addition to other work, unless a grade acceptable to the graduate program committee has been obtained in an equivalent course. An undergraduate course can be used with the approval of the graduate program committee. The thesis option – seven courses including core work plus an original thesis extended essay option – seven courses including core work plus two extended essays project option – eight courses including core work plus a research project course option – nine courses including core work plus ECON 997

Core Course Work
The core course work will normally consist of the following
• microeconomics – ECON 802
• macroeconomics – ECON 807 or 808
• econometrics – ECON 835 and either ECON 836 or 837

Elective Course Work
The remaining courses beyond those designated as core work will be ECON graduate courses or, with permission of the graduate program chair, courses in graduate business administration and other subjects.

Research and Oral Examination
Under the thesis, extended essay or project option, research papers must meet the standards set out in the Graduate General Regulations (page 249). An oral examination is required covering the students’ written research in particular, and program in general, as outlined in the Graduate Regulations.

Final Examination
Under the course option, there will be a final examination (ECON 997) on core subjects, which normally will occur during the final examination period of the students’ third term in the program.

Co-operative Education
This optional program provides work experience that complements MA studies. MA students in good standing with a minimum 3.0 GPA may apply to co-op after satisfactory completion of ECON 802, 807 (or 808), 835 and 836 or equivalent. The program consists of two separate work terms. Arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one term in advance (see page 237). To participate, prior approval from the graduate chair in the Department of Economics is required.

PhD Program
Admission Requirements
See “1.3.4 Admission to a Doctoral Program” on page 244. Also required is an MA with graduate work in core areas equivalent to ECON 802, 807, 835 and 836. Any core area deficiency must be filled by taking the appropriate course(s) in addition to the course work normally required. In certain cases, students may be transferred into the PhD program from the MA program after meeting MA core and credit requirements (16 courses beyond the BA honors is required for such a PhD program).

Degree Requirements
This program allows specialization in economics, economics and business administration, or economics and a related discipline. Normally, every PhD program will include the following:

1. Successful performance in 11 approved courses beyond the economics MA requirements listed above. Those specializing in economics must include ECON 803, 804, 808, 809, 837 and either 838 or 839; those specializing in economics and business administration must include ECON 803 and 804, or 808 and 809. Those specializing in economics must also complete ECON 900 which does not count towards the 11 courses. Other courses may be drawn from those normally offered at the graduate level by this or other related departments. Normally, a student must take at least five courses of regularly scheduled course work within this department; exceptions to this
unsatisfactorily is subject to the review of

Research on Immigration and Integration in the Metropolis
4653/4655 Diamond Building, 778.782.4575 Tel, 778.782.5336 Fax, www.riim.metropolis.net/
RIIM is one of four Canadian research centres studying the impact of Canadian immigrants on local economies, family, educational systems and physical infrastructure of cities. RIIM concentrates only on Vancouver but links to all other Canadian metropolitan sites and the world. This research group, based at Simon Fraser University, the University of Victoria and the University of BC, investigates immigrant impact in Vancouver.

Department of English
6129 Academic Quadrangle, 778.782.3136/4614 Tel, 778.782.5737 Fax, www.sfu.ca/english
Chair
T. Grieve BA, MA (Fraser), PhD (Johns H)
Graduate Program Chair
M. Linley BA (WLaure), MA, PhD (Qu)
Faculty and Areas of Research
See "Department of English" on page 153 for a complete list of faculty.
T. Alkan – Tudor literature and culture, romance, religious polemic
T. Brook – Post-war British literature, British cultural studies, feminist and gender theory, theories of affect, urban theory
P. Budra – Shakespeare, drama to 1642, Elizabethan and Jacobean poetry and prose, popular culture
D. Chariandy – post-colonial literature and theory, Canadian studies, diasporic theory
R.M. Cote – rhetorical theory and history, contrastive rhetoric, composition theory and pedagogy; literacy, discourse analysis (including 'public doublespeak' and 'plain language'), genre theory, rhetorical approaches to literary criticism, drama
C. Colligan – 19th century English literature and culture, obscenity, British Imperialism
S. Collins – American literature, Modernism, contemporary poetry and poetics
P. Cramer – media studies, discourse analysis, rhetoric, critical theory, argumentation, automatic text analysis
J. Crawford – early modern literary and cultural studies, women's literary history, Reformation and Protestant culture, history of the book, theory and history of gender and sexuality
L. Davis – Romantic literature, Scottish and Irish literature 1700-1850, literature and nationalism, feminist critiques of Romanticism, 18th century folk music and print culture
J. Derksen – contemporary poetry and poetics, globalization, urbanism, critical methodologies
P. Dickinson – modern drama, comparative literature, Canadian literature, Queer theory and gender studies, literature and film
M. Everton – colonial, early American and transatlantic print culture, history of the book, authorship
M. Gerson – Canadian literature and literary history, women and literature, print culture in Canada
M.A. Gillies – 19th and 20th century British literature
T. Grieve – modernism (poetry and fiction), twentieth century literature, nineteenth century poetry; the essay, history and theory of rhetoric; composition
A. Higgins – Medieval and Renaissance drama, Shakespeare, Middle English literature
M. Hussey – Medieval literature and Culture including Old English and Latin literary tradition, bilingual

GRADUATE

Dissertation Procedures
Thesis proposal seminar
This will be given by each candidate to fulfil the ECON 900 course requirement. ECON 900 will be taken in the summer term following completion of the student's comprehensive examinations. Each candidate produces a written paper, makes it available to all interested department members and presents it on a pre-announced date in the department. The candidate's supervisory committee should attend and arrange for others interested to also attend. That committee, along with the candidate, should decide on the future course of the student's research paying due regard to the comments that have been received.

Thesis core and a thesis seminar
These should be given by each candidate after the supervisory committee agrees that the thesis is substantially complete and before it is formally approved for defence. The thesis core should be a paper that describes the major original contributions of the thesis (preferably in a form appropriate for journal submission) and should be available to all interested department members.

Thesis defence
Procedures for the thesis defence are described in the Graduate General Regulations (see “1.1.1 Publication of Thesis” on page 249).

Satisfactory Performance
Each candidate's progress is assessed at least once a year in the fall term. Any student who performs unsatisfactorily is subject to the review of

aesthetics, intellectual history, the relationship between material and literary artifacts
C. Kim – Asian North American literature and theory, Canadian literature, diasporic and postcolonial literatures and theory, women's writing and feminist theory, print cultures and history of the book
C. Lesjak – Victorian literature and culture, feminist theory, theory of the novel
M. Levy – romantic literature, women writers, domesticity and the family, law and literature, literature and the environment
M. Linley – Victorian poetry and prose; 19th century women poets, literature and visual representation
S. McCall – contemporary Canadian literature, First Nations studies, post-colonial studies
R.A. Miki – 19th century American literature, modern American poetry, contemporary Canadian poetry, Asian Canadian literature, race and cultural theory
P.M. St. Pierre – Commonwealth literature, Canadian literature
E.A. Schellenberg – Restoration, 18th century literature, 18th century women writers, print culture
D. Solomon – 18th century literature, restoration drama and print culture
D. Symons – Medieval literature, Middle English romance, Chaucer, manuscript and print culture, popular culture, critical theory
S. Zwagerman – rhetoric and writing, speech act theories, gender and discourse, American literature

Admission Requirements
In addition to requirements in the Graduate General Regulations (page 243), the department requires evidence of academic writing ability in the form of at least two substantial literary essays which are scholarly in format and approach. The papers may be undergraduate essays previously prepared, or ones specially written for this purpose. Applicants to the Master of Arts for Teachers of English (MATE) are not required to submit a writing sample.

MA Program
This program develops scholars with a critical and comprehensive awareness of English studies. While offering specialization in one of various areas of strength in the department, the program requires students to fulfil a breadth requirement through coursework and thereby ground their interests in a wide and flexible understanding of English studies. Students without a strong background in English may be required to strengthen their preparation before admission. As well, all MA students complete ENGL 880 and 881, the graduate professional development seminars.

The program may be completed in one of two ways as shown below.

Option A
This option consists of six courses including ENGL 880, 881 and a pre-twentieth century literature course. In addition, students write a thesis of about 100 pages and defend it in an oral examination.

Option B
This option consists of eight courses including ENGL 880, 881, a pre-twentieth century literature course, and one other pre-nineteenth century literature course. In addition, students undertake an MA final research paper and defend it in an oral examination.

Full time students typically enrol in two regular courses per term, in addition to one of the required professional development seminars. The MA program is designed to be completed, normally with three terms. For further departmental requirements, consult the departmental handbook.

The department recognizes the special needs of working people who wish to improve their

Simon Fraser University 2007 • 2008 Calendar
qualifications. Some graduate courses are regularly offered in the evening.

Examinations

While the general regulations set the minimum CGPA necessary for continuance at 3.0, the department regards grades below B to be unsatisfactory and expects students to achieve above the minimum. If progress is unsatisfactory, withdrawal under “1.8.2 Review of Unsatisfactory Progress” on page 247 of the Graduate General Regulations may be required. Option A students complete four courses, two professional development seminars, write a thesis of about 100 pages and defend it in an oral examination. Thesis option students submit a thesis proposal and are examined by the supervisory committee no later than one term following the completion of course work. Students proceed with the thesis only after the approval of the supervisory committee and the graduate program committee.

Option B students (including MATE students) choose a paper or project from one of their six courses. The paper (or project) is revised and expanded to make it suitable for publication. The expanded work is examined by two faculty members, and defended in an oral examination. The paper (or project) must be completed and submitted for examination no later than the end of the term following completion of course work, and is judged on a pass/fail basis. A student who fails may be permitted a second and final attempt.

For further information and regulations, see “1.1 Degrees Offered” on page 243.

Specialization in Print Culture 1700-1900

The MATE program also permits interdisciplinary specialization in the politics of print culture (1700-1900), focusing on the changing role of printed texts in an emerging commercial society.

Master of Arts for Teachers of English (MATE)

This is a cohort program for English teachers in the secondary and elementary school system and in the collegiate system. This option offers an accessible two-year advanced degree in English studies which recognizes the particular needs of teachers for a review of new critical approaches in the field and for scheduling adapted to the demands of employment. The MATE cohort program consists of eight courses and an MA final paper or project. Two of these are required cohort courses, ENGL 831 and 834, which are taught as MATE cohort courses, focusing on recent critical approaches to literary study and on advanced research methods, respectively.

For information concerning examinations, see Examinations above.

Interdisciplinary Studies

In addition to the MA programs described here, which accommodate and encourage interdisciplinary study, the University offers degree programs to exceptionally able applicants whose proposed studies cannot be carried out in any existing program. Students interested in pursuing an MA may wish to submit a proposal for special arrangements through the Office of the Dean of Graduate Studies. See “1.3.4 Admission to a Doctoral Program” on page 244.

Joint Master’s in English and French Literatures

This program allows students who have already been trained in both literatures to continue studies beyond the undergraduate level. See “Joint Master in English and French Literatures” on page 290.

PhD Program

Applicants will have a well planned project that integrates with the department’s areas of expertise. Cross disciplinary proposals and innovative studies are encouraged. Students are expected to contribute at all stages of the program.

The department’s major areas include English literature, language, and print culture. Library resources include the contemporary literature collection, the largest single collection of post-war experimental and avant-garde poetry in Canada; the Wordsworth collection, including one of the largest collections of Lake District writings; William Blake drawings, illuminations and engravings in facsimile. The library also has on-line scholarly databases and resources in all major areas of study and subscribes to a wide range of leading academic journals.

The program is normally completed within four years.

Admission Requirements

Students must have an MA or equivalent with high standing from a recognized university and a solid grounding in English studies. To fill any academic gaps, extra undergraduate or graduate courses may be required. Before accepting a student into the program, the department will consider the proposed research in relation to faculty resources in the field.

To apply, transcripts of all previous post-secondary studies, three academic reference letters, two academic writing samples, and a one to two page doctoral project description are required. See “1.3 Admission” on page 243 for admission requirements.

Application Deadline

February 1

Residence Requirement

Six terms

Program Requirements

The first two program years involve course work, field examinations, and a thesis prospectus to provide necessary grounding before the thesis project. In the third year, students engage in dissertation research and writing. Upon submission, the graduate chair functions as advisor until a senior supervisor and supervisory committee are appointed. Each student is matched with a potential senior supervisor, normally upon admission, and the supervisory committee should be formed during the first year and no later than the beginning of the field exams. Student and senior supervisor are encouraged to meet early.

Language Requirement

PhD students must demonstrate to the supervisory committee an acceptable reading ability in a language other than English. For information and regulations, see “Graduate General Regulations” on page 243.

The program’s three stages include course work; field exams and thesis prospectus; thesis oral defense.

Courses

By the third term’s end, the student completes five regular courses, at least one of which must be outside the student’s special area. ENGL 881 is also completed, which is the graduate professional development seminar. The senior supervisor, in consultation with the graduate program chair, advises the student about course choices.

Field Exams and Thesis Prospectus

The field exam process begins at the start of the third doctoral term, normally in the first summer term, and must be completed by the end of the sixth term. There are two fields to be taken consecutively in the fourth and fifth terms. The thesis prospectus is written in the sixth term.

Field exams are in the form of a take-home essay, written within a week and graded pass/fail. In exceptional cases a distinction will be recognized. Should a student fail a field exam, it can be repeated not later than the following term. A second failure will require a review of the student’s progress. Normally, those who fail two field exams must withdraw from the program. Once the field exams are complete, the student will undertake the thesis prospectus in preparation for writing the dissertation. See department handbook for examples of fields, the field schedule, and the thesis prospectus schedule (www.sfu.ca/english/Gradwebpage/progdes.html).

The Field Committees

The committee for the secondary field, which will be written first, consists of an advisor who is a field specialist and one knowledgeable faculty member. The primary field committee, which will be written second, consists of three faculty members: the primary field advisor (normally the dissertation supervisor) and two faculty members in the field.

Secondary Field

The secondary field examination paper ensures a comprehensive expertise in an area of study distinct from, but providing a basis of knowledge that is useful to the student’s field of specialization. The department offers fields in three general areas (historical, geographical, and theoretical) and may consider other fields if faculty and library resources are sufficient and it is academically appropriate.

Primary Field

The primary field exam ensures that students have a broad knowledge and understanding of the literature, historical contexts and critical history of the primary field of English studies that is germane to their dissertation area and in which they will be claiming expertise as university teachers and scholars.

Thesis Prospectus

The thesis prospectus guides students toward defining a thesis topic and is undertaken normally in the sixth term following the completion of the second field exam. The supervisory committee for the thesis prospectus will be the dissertation committee that was formed for the primary field.

Thesis

After the completion of the thesis prospectus, the candidate will write a scholarly thesis normally consisting of between 200 and 250 pages (not including bibliography).

From the time of the supervisory committee’s appointment, the student and senior supervisor meet at least three times a term through the field exam period, the thesis prospectus term, and the thesis research and writing period.

The completed thesis is defended in an oral exam. The (defence) examining committee consists of a chair (normally the graduate program chair), members of the supervisory committee (senior supervisor and at least one other department member), a faculty member external to the department, and an external examiner who is not a member of Simon Fraser University.
**Department of French**

2630 Diamond Building, 778.782.4740 Tel, 778.782.9392 Fax, www.sfu.ca/french

**Chair** (to be announced)

**Graduate Program Chair** (to be announced)

**Faculty and Areas of Research**

See "Department of French" on page 157 for a complete list of faculty.

J. Calderón – 20th century and contemporary literature, cultural studies, literary theory

R. Canac-Marquis – transformational syntax, morphi-syntax, formal semantics, anaphora, second language acquisition

R. Davison – 19th century French literature, correspondence and pedagogy, women writers, émigré writers

L. Frappier – French Renaissance literature, French humanist tragedy, royal entries, Québécois theatre

M.C. Faugeras – French linguistics, sociolinguistics, Creole French dialects

C. Guilbault – experimental phonetics, applied linguistics, dialectology, speech perception

M.-E. Lapointe – French and English literatures of Québec (novels, essays, criticism), literary history theories, cultural memory, intellectual filiations

G. Merler – modern French and Quebec literatures, methods of discourse analysis, Stendhal, individual psychology and literary analysis, poetry

G. Planchenault – second language acquisition, didactics of French, intercultural pragmatics, sociolinguistic competence, French cinema

S. Steele – exile studies, French war writing, Medievalism in the Third Republic (secondary interest in Chrétien de Troyes), literary correspondence (French/English), poetry in surrealism and its vicinity

C. Vigouroux – sociolinguistics, ethnography, migration, francophonie, language and globalization, Africa

J. Viswanathan – modern French and French Canadian novel, narrative theory, film and fiction

P.M. Wrenn – text linguistics, experimental phonetics, Canadian French, phonostylistics, phonology

The department offers graduate research leading to an MA or PhD in French literature, French linguistics or French literature. Students interested in French as a second language (FSL) should contact the graduate chair. (The FSL option will be of particular interest to those contemplating a career in the teaching of French.) Students seeking PhD admission may apply under special arrangements provisions of graduate general regulation 1.3.4.

The major areas of study are as follows.

**Linguistics:** Linguistic analysis of French (sound system, morphology, syntax, lexicon), varieties of French (social, regional and stylistic variations), French Creoles, French linguistic theories, French applied linguistics, theoretical approaches to the acquisition of French as a second language. A variety of practical applications of linguistic theory may be envisaged: pedagogy, translation, stylistic analysis.

**Literature:** Periods and genres: French Medieval literature, travel accounts, 18th century literature, poetry and novel of the 19th century, 20th century fiction, poetry and drama, Québécois literature. Critical approaches: literature and society, women writers, history of literature, cultural studies, discourse analysis, interdisciplinary approaches to literature, teaching of literature.

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**MA Program**

**Admission Requirements**

Candidates must satisfy the general admission requirements as shown in "1.3.2 Admission to a Graduate Diploma Program" on page 243 and "1.3.8 Conditional Admission on page 244 of the Graduate General Regulations. Program admission requires a sound background in French literature or French linguistics, as well as a good command of both oral and written French. Candidates lacking these must remedy the deficiency before admission is granted through satisfactory completion of one or two terms as a qualifying student (see "1.3.5 Admission Under Special Arrangements" on page 244).

Upon admission, each student will be assigned a temporary supervisor. The program's degree requirements may be completed with 'thesis,' with 'project' or 'without thesis.' In each case, the student works under a supervisory committee's direction (see "1.6 Supervision" on page 246) that has been appointed by the end of the second term.

Initially, students are admitted to the MA or PhD without thesis option. Transfer to the MA with thesis or PhD with project option may be permitted after completion of the second term on supervisory committee recommendation, and subject to graduate studies committee approval. Required course work, thesis topic, project topic or area of field examination and other requirements are approved by the supervisory committee and graduate studies committee.

**Degree Requirements**

Students may be required to complete additional courses to remedy deficiencies or to ensure suitable thesis preparation or project research. The following are the minimum requirements.

**MA with Thesis**

Students in the MA with thesis option successfully complete 15 credit hours of graduate courses from their chosen concentration, either in linguistics or literature. Within the 15 credit hours, with senior supervisor approval, students may complete up to five credit hours outside the department. In addition, students complete a thesis of about 100 pages that is defended at an oral exam as described in 1.9 and 1.10 of the Graduate General Regulations. Students submit a written thesis proposal no later than one term following the completion of course work.

Substantive thesis work may proceed only after approval of the thesis proposal by the supervisory committee and the graduate studies committee.

**MA with Project**

This option requires a minimum of 20 graduate credit hours. Fifteen credit hours must be completed within the Department of French. With the approval of the senior supervisor, up to five credit hours may be in a course outside the department. Also, students complete a project that contributes to French linguistics, French/francophone literature or FSL pedagogy which is submitted for oral examination. The project may have a practical component in a non-traditional format. Students submit a written proposal no later than one term after course work completion. Substantive project work may proceed only after project proposal approval by supervisory committee and graduate studies committee.

**MA without Thesis**

Students selecting this option are required to complete a minimum of 30 graduate work credit hours. With the senior supervisor's approval, up to 10 credit hours may be completed by taking courses outside the department. In addition, students must take a field examination based on three completed courses. Field examination preparation will be undertaken on the supervisory committee's advice.

**Language Requirement**

Students must demonstrate to the graduate program committee an acceptable competence in written and oral French and must show at least a reading knowledge of one language other than English or French that is acceptable to the supervisory committee. This requirement is fulfilled by completing two courses in that language or by passing an exam of translation of a 250 word text into English.

**Graduate Courses**

**Core Courses**

Course selection must be made in consultation with the student's senior supervisor.

**Linguistics and Literature**

FREN 803-5 Research Methods in French Linguistics and/or French Literature

Linguistics

FREN 804-5 Topics in the Structure of French I

FREN 805-5 Topics in the Structure of French II

FREN 806-5 Topics in the Acquisition of French

FREN 810-5 Pragmatics and the Structure of French

FREN 811-5 Topics in the Varieties of French

FREN 812-5 Approaches to the Linguistic Analysis of French

FREN 816-5 Sociolinguistic Approaches to French Studies

Literature

FREN 820-5 Types of Discourse

FREN 821-5 Theories and Methods of Literary Analysis

FREN 822-5 Socio-cultural Approaches to French Literature

FREN 823-5 Interdisciplinary Approaches to French Literature

FREN 824-5 Topics in French Canadian Literature

FREN 825-5 Topics in French Literature

FREN 826-5 Monographic Studies

**Joint Master in English and French Literatures**

Students already trained in both literatures may continue studies beyond the undergraduate level in this joint program. Students enrol in and, if successful, receive a degree from one of two departments known as the home department. The other is designated the associate department.

**Application for Admission**

Students may apply to either department or to both, indicating a preference. Both departments must agree on the student's admission or on conditions for admission. A home department will be assigned in consultation with the student and with the agreement of both departments. A minimum of 15 upper division undergraduate credit hours in each discipline is required for admission. The student, after admission and two terms of course work, will have the option of completing an MA either with thesis or without, subject to agreement of both departments.

**Supervision**

The home department selects the joint supervisory committee of two faculty from the home department and one from the associate department.

**Home Department Requirements**

If English is the home department, students must complete both of

ENGL 810-5 Graduate Professional Development Seminar Part I

ENGL 811-5 Graduate Professional Development Seminar Part II
See the Department of English about requirements.

Concentration Requirements
In addition to department requirements, students also complete either the MA with thesis or without thesis.

MA with Thesis
For this option, students successfully complete another 20 credit hours selected from literature courses in the Departments of French and English, including at least one course from each department (one course from one department and three from the other, or two from each department). Students also complete a thesis of about 100 pages on a topic acceptable to the supervisory committee, and it is defended at an oral examination as described in "1.9 Preparation for Examinations" on page 247 and "1.10 Examinations" on page 248.

MA without Thesis
Students successfully complete another 30 credit hours selected from Departments of French and English literature courses, including at least two courses from each department (two from one department and four from the other, or three from each department) and a written field exam based on three completed courses. Field exam preparation is on the advice of the supervisory committee.

Department of Geography
7123 Robert C. Brown Hall, 778.782.3321 Tel, 778.782.5841 Fax, www.sfu.ca/geography

Chair
E.J. Hickin BA, PhD (Syd), PGeo
Graduate Program Chair
N.K. Blomley BSc, PhD (Brist)
Faculty and Areas of Research
See "Department of Geography" on page 161 for a complete list of faculty.

N.K. Blomley – political and urban geography
T.A. Brennand – glacial geomorphology, quaternary environments, regional paleoecology
J.A.C. Brohman – third world development, economic geography, Latin America
R.A. Clapp – economic geography, resource conservation, forest policy
V.A. Crooks – health geography, social geography of health
S. Dragicevic – geophysical information science, spatial analysis and modeling
M.F. Garvert – meteorology, climatology
A.M. Gill – tourism and community planning, resources management
R. Hayter – regional development, manufacturing, BC’s forest economy, Japan
N. Hedley – geovisualization and cartography
E.J. Hickin – fluvial geomorphology
M. Holden – urban and environmental policy, sustainable development
I. Hutchinson – quaternary environments, coastal studies
J. Hyndman – feminist, political and cultural geography
P.T. Kingsbury – cultural geography, social theory, psychoanalysis
L.F.W. Lesack – ecosystem biogeochemistry, land and water interactions, limnology
G.P. Mann – environmental geography, labor, political economy
E. McCann – urban, political and social geography, urban planning
J.T. Pierce – economic and rural geography, research methodology
A.C.B. Roberts – cultural, historical, paleo environments, remote sensing, photogrammetry
M.L. Roseland – regional planning and sustainable communities
M.G. Schmidt – soil science, forest ecology
N.C. Schuurman – geophysical information science, spatial data and integration
J. Sturgeon – human geography of Asia
J. Taylor – environmental history, fisheries
I. Tromp-van Meerveld – hillslope and catchment hydrology
J. Ventitti – fluvial geomorphology

Associate Members
W.G. Gill – geography of transportation
M.V. Hayes – social geography, population health

Areas of Research
The Department of Geography offers MA, MSc and PhD degrees in the Faculties of Arts and Social Sciences, and Science. For an MSc degree in physical geography, see the see “Geography Program” on page 320 in the Faculty of Science).

Emphasis is placed on the application of theoretical frameworks to the analysis of social, economic and physical landscapes, with particular reference to western North America.

MA Program
Admission Requirements
Normally, an undergraduate 3.25 CGPA is required for entry. Admission is in the fall term and applications should be completed by February 1. Admission requires a command of quantitative techniques and qualitative methodologies. Candidates lacking these will take courses equivalent to GEOG 251 and 301. The admitted candidate works under the faculty advisor’s guidance pending the choice of a two faculty member supervisory committee, one of whom may be from outside the department. They will be chosen by the beginning of the second term.

Degree Requirements
All MA candidates are expected to complete the requirements (30 credit hours) in six terms. The MA program requires a thesis (18 credit hours). The remaining 12 credit hours consist of required and elective courses. The recommended maximum thesis length is 120 pages (including bibliography and end notes, but excluding appendices). The thesis involves the conceptualization of a problem and the collection, analysis and interpretation of empirical data. Normally, MA students present proposed research at a one day conference (Research Day) held annually in the spring. A written proposal should be submitted to the student’s supervisory committee, defended in colloquium and approved by the end of the second term. The completed thesis will be judged by the candidate’s examining committee at an oral defence.

Course Requirements
GEOG 600 and 601 are geography graduate seminars which offer each fall and spring. Graduation is on a satisfactory/un satisfactory basis. Attendance is compulsory for a satisfactory grade. GEOG 604 is required for MAs and is offered every year. With the advisor’s consent, request can be made to replace it by another course. One or a GEOG 620 and 640 (special topics) is normally offered each year depending on research interests. Other courses are offered less frequently, depending on student demand and faculty availability.

Master of Science Program
The department offers a program leading to the MSc degree in the Faculty of Science. See the Geography entry in the Faculty of Science section (page 320).

PhD Program
For admission requirements, see “Graduate General Regulations” on page 243. Applicants must have completed the MA or MSc requirements at Simon Fraser University or equivalent. Students admitted to the PhD program without an appropriate background may be required to make up specified courses.

Supervisory Committee
The student, upon admission, works under the guidance of a faculty advisor, pending the choice of a supervisory committee. The supervisory committee, normally consisting of three faculty members, one of whom may be from outside the department, will be chosen by the beginning of the second term.

Degree Requirements
The advisor, and subsequently the supervisory committee, and the student determine a study program to suit the background and research objectives of the candidate. After supervisory committee consultation, students can elect, or may be required to take courses to acquire knowledge and skills, including language, relevant to their research.

Qualifying Examination
Written and oral qualifying examinations establish competence to proceed with doctoral thesis research and are taken at the end of the second residence term and no later than the end of the third. Students who fail the written or oral exam may take each one, after a one term lapse.

Both parts of the qualifying examination must be successfully completed by the end of the fourth residence term. The qualifying examination committee consists of supervisory committee members (the senior supervisor acts as chair), plus an examiner external to the supervisory committee.

Written exams comprise four papers jointly agreed by the qualifying examination committee. The oral must be held within three weeks of completion of the written examination. The student is examined primarily in topics covered by the written exams, but questions may range over the entire discipline.

Thesis
Candidates successfully completing qualifying examinations will present a thesis proposal at a departmental colloquium no later than the end of the fifth residence term. The supervisory committee must approve the written proposal prior to the start of substantive research. The completed thesis will be judged by the candidate’s examining committee at an oral defence. If the defence is failed, the candidate is ineligible for further degree candidacy in the program.

See “Graduate General Regulations” on page 243.

Department of Gerontology
2800 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.5065 Tel, 778.782.5066 Fax, gero@sfu.ca, www.harbour.sfu.ca/gerontology/

Chair
A.V. Wister HBA, MA, PhD (WOnt)

Graduate Program Chair
H. Chaudhry BA (B’esh Engin), MSC Architecture (Tex), PhD (Wisc)

Faculty and Areas of Research
See “Department of Gerontology” on page 163 for a complete list of faculty.

H. Chaudhry – design for dementia, place-based reminiscence, long term care and self in dementia.
GERO 404-3 Health and Illness in Later Life
GERO 407-3 Nutrition and Aging

Both or No Concentrations
three of
GERO 300-3 Introduction to Gerontology*
GERO 400-4 Seminar in Applied Gerontology*
GERO 409-3 Mental Health and Aging
GERO 420-4 Sociology of Aging

KIN 461-3 Physiological Aspects of Aging
PSYC 357-3 Psychology of Adult hood and Aging

*recommended

Students also complete at least one undergraduate methods course. Under special circumstances, the five prerequisite course requirement may be waived.

Curriculum and Description
There are four program components: a core methods course; electives; thesis or project; and internship.

Students complete six courses (one core, and five electives chosen from the two concentrations) and complete a thesis or project. Students who complete a thesis in lieu of the project will take one less elective course. (See Thesis or Project Option below).

Core Methods Course
Completion of one core methods course is required.

GERO 803-4 Analytical Techniques for Gerontological Research

Elective Courses from Areas of Concentration

Students select remaining courses from the concentration courses or from outside the program if approved by the student's senior supervisor, and may build a concentration in environment and aging or health and aging. A concentration is considered to be at least two courses in one of the two areas.

Environment and Aging

GERO 810-4 Community Based Housing for Older People
GERO 811-4 Institutional Living Environments
GERO 822-4 Families, Communities and Health**
GERO 830-4 Human Factors, Technology and Safety

Health and Aging

GERO 801-4 Health Policy and Applied Issues in Gerontology
GERO 802-4 Development and Evaluation of Health Promotion Programs for the Elderly
GERO 820-4 Principles and Practices of Health Promotion
GERO 840-4 Special Topics in Gerontology***
GERO 889-4 Directed Studies***

**may be used for either concentration
***may be used for either concentration depending on the topic

Project or Thesis Option
Students present a written thesis/proposal to their supervisory committee. Project examples include: program evaluation for older adults; design and implementation of environments or services for elderly persons; and analyses of secondary data. A project will be evaluated by the supervisory committee and a qualified external reader. The project requirement must meet the guidelines set out in the “Graduate General Regulations” on page 243.

Students preparing for advanced graduate training may be permitted to select a thesis option and will complete one less elective course. The thesis provides high quality focused research. Original and innovative research is encouraged to meet this requirement. Committee selection and thesis proposal approval will follow the same steps as the project. The thesis requirement must meet the “Graduate General Regulations” on page 243.

Internship
Students lacking relevant work experience will supplement their program with an internship by working for an agency or organization in a position of responsibility for a maximum of one term.

Department of History
6022 Academic Quadrangle, 778.782.4467 Tel, 778.782.5837 Fax, www.sfu.ca/history

Chair
J.S. Craig BA, MA (Car), PhD (Camb), FRHistS

Graduate Program Chair
(to be announced)

Faculty and Areas of Research
See “Department of History” on page 164 for a complete list of faculty.

F. Becker – East Africa, Muslim Africa
E. Chenier – Canada
L. Cloosse – wider world
L. Cormack – history of science and technology; early modern Britain
J.S. Craig – early modern England
A. Geiger – immigration, North American West
A. Gerolymatos – Greece and Balkans
N. Guyatt – United States
M.E. Kelm – Canada/First Nations
W. Keough – Atlantic Canada
D. Krallis – Byzantine
T. Kühn – Middle East
M. Leier – Canada, labor
J.I. Little – Canada, French Canada
D.N. MacLean – Middle East, Islam, India
J. Matsumura – East Asia
E. O’Brien – Renaissance
H. Pabel – early modern Europe
R. Panchasi – modern France
H. Pohlandt-McCormick – Africa
N. Roth – modern Germany
A. Seager – Canada, labor
P. Sedra – Middle East
J.O. Stubbs – modern Britain
J. Taylor – North American, environmental history
I. Vinkovetsky – Russia

Areas of Study
The Department of History offers graduate research leading to an MA and PhD. The major study areas are Canada, Europe, colonialism and imperialism, the Middle East, the Americas, and Africa. Only those who wish to specialize in one of the specific fields covered by the list of MA courses in the case of MA applicants, or PhD areas of specialization in the case of PhD applicants, will be considered. The department reserves the right to accept candidates only when a qualified supervisor is available and the University resources (including library facilities) are deemed adequate for the stated research priority.

Admission Requirements
Admission will be in the fall term only, and should be completed by February 15. Applicants must submit a sample of their written work.

Graduate Courses
HIST 814 is a compulsory MA seminar offered each fall term. HIST 806 and 810 are also offered as seminars each year. At least two other seminars will normally be offered, the choice depending on the research interests of the majority of the students.

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MA Program

Conditions of Admission
MA candidates must satisfy the minimum University entrance requirements: at least a 3.0 average or its equivalent. In addition, the department requires a 3.33 (B+) average in history courses taken during the last two undergraduate years. A degree in a discipline related to history may be accepted in some cases.

Programs of Study
Upon graduate program admission, students are assigned a provisional supervisor. See “1.6.4 Supervisory Committee” on page 246 for supervisory committee information. All MA degree candidates must satisfy the following minimum requirements, totalling 30 credit hours.

The department offers two options. The thesis option requires 20 credit hours (four courses of five credit hours each), of which at least 15 must be in graduate courses in the department. The project option requires 30 credit hours, (six courses of five credit hours each) of which 20 must be in graduate courses in the department.

Normally, three seminars are offered each fall and spring term, including one in conjunction with the University of British Columbia’s Department of History, at Simon Fraser University Vancouver. All Canadian history students must take HIST 806, another seminar of their choice, and the research seminar HIST 814. All European history students take HIST 810, another seminar of their choice, and the research seminar HIST 814. Other students must take one seminar and HIST 814. Remaining course requirements may be taken as readings courses.

In HIST 814, thesis option students write a paper which becomes the thesis basis, presenting a coherent thesis topic and place within the framework of existing area work. Project option students write a short research paper which becomes the basis of the required research project.

Full time MA thesis option students complete degree requirements in a maximum of five terms, and project option students in a maximum of three. Part time thesis option students complete degree requirements in a maximum of eight terms and part time project option students in a maximum of six terms.

Students with significant financial support from fellowships, scholarships or teaching assistantships are expected to take a full term course load. Those with no financial aid from fellowships, teaching assistantships, etc. may be considered part time students and may take only one course per term.

Students complete a thesis of 10 credit hours to a maximum of 100 pages, or a research project of approximately 35 pages. The thesis/research project must demonstrate capability in scholarly research and procedures as well as independent critical thought. Before the beginning of the third term, thesis option students defend the thesis prospectus before an examining committee composed of the supervisory committee and the graduate program committee chair. The project option student will defend the research project in the same time frame.

Full time thesis option students complete their degree requirements in a maximum of five terms, and project option students in the same time frame. Part time students may take one additional year for completion.

Language Requirements
Students must demonstrate a reading ability in a language other than English that is acceptable to the supervisory committee. Students proposing to study Canadian history must demonstrate an ability to read French. Ability is determined by a time limited examination consisting of the translation of a passage of history in the particular language. A dictionary is permitted. The Department of French offers courses to help students meet the language requirements.

PhD Program

General
Prospective PhD candidates are advised that the degree is granted in recognition of the student’s general grasp of the subject matter of a broad area of study; for the ability to think critically; and for the power to analyse and co-ordinate problems and data from allied fields of study.

All doctoral students are expected to take at least one graduate seminar course for credit in their first year. A student ordinarily is admitted to the PhD program after completion of an MA or its equivalent. BA applicants applying directly to the PhD program must have at least a 3.5 GPA or its equivalent. Candidates for the MA may, under exceptional circumstances, be admitted to the PhD program without completing the MA requirements if they have 20 credit hours of course work. Admission from the MA program is contingent upon a distinguished level of performance, recommendation of directing faculty, scholarly potential, and available department resources.

Programs of Study
Upon program admission, each student is assigned a faculty supervisor. See “1.6.4 Supervision” on page 246 for information on supervisory committees. The supervisory committee and the student determine three fields of study, at least two of which are chosen from the list below. A third field may be chosen within or outside the Department of History with permission of the graduate studies committee.

The student and each field supervisor will agree as soon as possible on a general readings list of approximately 45 books (or equivalent) in each field. Reading list copies must be submitted to the graduate program committee chair by the beginning of the second term. The graduate program committee approves these lists and places them in the student’s files. Students are expected to cover the material on these lists, preferably by means of a structured reading and writing program with their supervisors.

The comprehensive examinations, based on reading lists, are offered twice a year in the first half of the fall and spring terms. Written exams are administered in weeks five and six. Oral exams are scheduled in weeks six through seven of the same term. Students who miss the first exams in their fourth term due to extenuating circumstances must take them the following term. For details about the nature of the comprehensive exams, see the department’s graduate brochure. All written examinations must be passed before the oral comprehensive exam. A student who fails one of the written examinations, and one only, will have one additional chance for re-examination before sitting the oral exam. A ‘fail’, ‘pass’, or ‘pass with distinction’ will be assigned by the examining committee after oral exam completion. Students failing at this stage are not permitted to continue in the program.

PhD Fields
Canadian social and cultural history
Canadian political and economic history
Early modern European history
European social history
European cultural history
European intellectual history
European international relations since the early 19th century

rural history
mediaeval Europe
France since 1789
Germany since the 18th century
Russia since Peter the Great
the British Isles since 1485
Great Britain as a great power since 1763
state and society in the nineteenth century
Ottoman empire
state and society in the twentieth century
Middle East
the Middle East in the international system
the geopolitics of the Indian empire
Islamic India
sub-Saharan Africa since 1800
European settlement in Africa
United States to 1890
United States since 1890
United States cultural history 1830-1890
colonial Latin America
Latin America since Independence

Thesis
Within one term of successful completion of comprehensive exams and formal candidacy admission, students submit a thesis prospectus on a topic selected from the specialization areas listed above. The same procedure is followed for MA candidates but the thesis committee may seek the participation of another who has particular expertise in the proposed thesis topic area. Through the thesis, the student must demonstrate an original contribution to knowledge. When the thesis is complete and the student is ready to offer himself/herself for the degree, a thesis examining committee will be formed, composed of the departmental graduate program committee chair or designate; the student’s supervisory committee; a faculty member or a person otherwise suitably qualified who is not a supervisory committee member; and an external examiner who is not a University employee. This committee examines the student on the thesis and in the student’s major field of study. See “Graduate General Regulations” on page 243 for further information and regulations.

Language Requirements
Students must demonstrate a reading ability in one language other than English that is acceptable to the supervisory committee. Students proposing to study Canadian history must demonstrate a reading ability in French, determined by a time limited examination consisting of the translation of a history passage in the particular language. A dictionary will be permitted.

The Department of French offers courses to help graduate students meet this requirement.

Centre for Latin American Development Studies
5053 Academic Quadrangle, 778.782.3518 Tel, 778.782.5799 Fax, www.sfu.ca/las
Director
E. Hershberg BA (Indiana), MA, PhD (Wis)
Graduate Program Director
E. Hershberg BA (Indiana), MA, PhD (Wis)
Faculty and Areas of Research
See “Centre for Latin American Development Studies” on page 170 for a complete list of faculty.
E. Hershberg – democracy and development in Latin America, neoliberalism, state and society in conflict, social policy in the Andes, human rights abuses in the southern cone
A. Hira – industrial, technology and regulatory policies in Latin America and East Asia

Simon Fraser University 2007 • 2008 Calendar
Admission Requirements

Admission is conducted biennially. Applicants must satisfy the Latin American development studies graduate program committee that they are well prepared academically to undertake Latin American development studies graduate work. See "1.3 Admission" on page 243 for additional University requirements. As well as these, the program requires:

• a sample of the candidate’s scholarly work, preferably with a Latin American focus (i.e., an undergraduate paper previously submitted as part of a course requirement)
• a short statement of purpose detailing interests and planned course of study
• a short statement of purpose detailing interests and planned course of study
• a sample of the candidate’s scholarly work, preferably with a Latin American focus (i.e., an undergraduate paper previously submitted as part of a course requirement)
• proof of reading and speaking competence in a language of Latin America and the Caribbean. Some courses may be taken in Spanish or Portuguese, but the credit is subject to their designation as full content Latin American courses by the Latin American studies department toward this degree.
• if applicable, a resume of previous relevant course work and/or employment will be considered.

Special Arrangements

Students seeking admission to a Latin American development studies doctoral program may apply under the Special Arrangements provisions of the Graduate General Regulations section “1.3.4 Admission to a Doctoral Program” on page 244.

Library Program

Program

2100 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.5152 Tel, 778.782.5159 Fax, www.sfu.ca/gls, glsp@sfu.ca

Director

S. Duguid BA (III), MA, PhD (S Fraser)

Graduate Program Chair

A.M. Feenberg-Dibon, Diplome d’Etudes Superieures (Sorbonne), PhD (Calif)

Steering Committee

H. Bai, Education
S. Duguid, Humanities
A.M. Feenberg-Dibon, Humanities
M. Fellman, History
J. Jones, Engineering
M. Kenny, Sociology and Anthropology
J. Martin, Education
K. Mezei, English
G. Poitras, Business Administration
P. Schouls, Emeritus
E. Stebner, Humanities
J. Sturrock, Emeritus

Advisor

Ms. J. Koczwarzski, 2109 Simon Fraser University Vancouver, 778.782.5152 Tel, koczwarz@sfu.ca

This program, which leads to a master of arts, liberal studies, is for adults returning to part time study. The program, which is affiliated with the Department of Humanities, is offered at Simon Fraser University Vancouver during evening and weekend hours. In the best tradition of liberal education, the program addresses some of the great works of our intellectual and artistic heritage, studies the perennial concerns that have shaped our culture, and explores contemporary perspectives on traditional ideas and values. The interdisciplinary seminars offer wide reading, careful reflection, and intense discussion. They are taught by faculty who are chosen for their expertise and teaching excellence, and for their interest in interdisciplinary studies.

Admission Requirements

Applicants must satisfy the liberal studies graduate program committee of academic suitability. In addition to the normal graduate admission requirements, applicants must demonstrate readiness through reference letters, written work samples, and normally an interview. Exceptionally, the graduate program committee may recommend admission to those who do not meet normal requirements but who, by reason of prior experience, strong credentials and demonstrated competence, are particularly suited.

Degree Requirements

Students complete six seminar courses and choose one of the three options listed below.
• submit two extended essays for oral examination
• submit one project for oral examination
• complete two additional courses and write a field examination based on material covered in three completed courses.

Two of the six required core courses (LS 800 and 801) are normally completed in the first two terms. The remaining courses may be selected from those offered in the program. Students choosing the third option will complete eight courses.

Students may enrol in one or two courses per term. Exceptionally, and by agreement of the graduate program committee and the department involved, a student may take two graduate courses in other departments toward this degree.

Extended essays, developed from course work papers and may make significant use of non-written media, will also be developed from course work and is examined as specified in Graduate General Regulations "1.10.1 Thesis Examination” on page 248. One of the two additional courses (see above) must be LS 898 and the other may be any LS course other than LS 998 or 999. Field examination preparation is on the supervisor’s committee’s advice.

The program emphasizes a community of inquiry and discussion over independent research and entails several special expectations within the graduate study general regulations. Newly admitted students must attend an introductory short course prior to the beginning of the first core course in the fall term. Supervisory committees are arranged by the graduate program committee chair. With the dean of graduate studies’ approval, the supervisory and exam process for the extended essays or project may be modified to emphasize collegial exchange.

Students should expect to participate in out-of-class activities, such as pre-class dinners, that encourage interchange and enhance intellectual community.

Because the program is designed for individuals having other obligations, and who may for that reason require greater or lesser amounts of time to complete the program, it has been approved for part-time study.
Liberal Studies Courses
LS courses are intensive seminars. Core courses LS 800 and 801 develop a common readings base. The other six seminar courses may vary in approach and content each time they are offered, and will address a central tension in our intellectual lives, trace some of its sources, and consider its impact on our experience of the present. All courses are cross-disciplinary and may draw on faculty from across the University.

Department of Linguistics
9203 Robert C. Brown Hall, 778.782.4725 Tel, 778.782.5659 Fax, www.ling.ca/linguistics
Chair
Z. McRobbie UDipl, Dipl, PhD (Eötvös Loránd, Budapest), PhD (Manit)
Graduate Program Chair
(to be announced)
Faculty and Areas of Research
See "Department of Linguistics" on page 171 for a complete list of faculty.
J. Aldere – phonology, morphology, and their interaction, computational learning algorithms, optimality theory and Athapaskan linguistics
C. Burgess – accent and fluency perception, speaking rate effects, and second language acquisition research design
D.B. Gerds – syntax
C-H. Han – syntax, semantics, computational linguistics
N. Hedberg – syntax, semantics, pragmatics, cognitive science
T. Heift – computer assisted language learning, applied linguistics, and computational linguistics
P. McEtridger – computational linguistics
Z. McRobbie – experimental phonetics, phonology, Finno-Ugric linguistics, sociolinguistics
J.D. Mellow – second language acquisition and teaching, First Nations languages
M. Munro – applied linguistics, experimental phonetics, second language acquisition
P. Pappas – modern Greek, medieval Greek, language variation and change, contact linguistics, Indo-European linguistics, Balkan linguistics.
F.J. Pelletier – formal semantics of natural language, philosophy of language and logic, computational semantics
T.A. Perry – phonology, German linguistics, linguistic theory
J.M. Sosa – Hispanic linguistics, dialectology, language methodology, Caribbean area sociolinguistics
M. Taboada – discourse, pragmatics, computational linguistics, system functional linguistics
Y. Wang – phonetics, language acquisition, psycholinguistics, neurolinguistics, cognitive science
Associated Faculty
For areas of research, refer to the department listed.
M. Boelscher Ignace, First Nations Studies, Sociology and Anthropology
F. Popowich, Computing Science
W. Turnbull, Psychology
J.W. Walls, Humanities

Degrees Offered
The program offers graduate work leading to the degrees of MA and PhD in linguistics.
Applicants are considered by how their proposed programs of study coincide with the research and teaching interests of the department. Where a student's interests span more than one field of study, a program of course work and supervised research in
more than one field may be arranged. Individual programs may also be set up in co-operation with other departments under the special arrangements provisions of "1.3.4 Admission to a Doctoral Program" on page 244 of the Graduate General Regulations.

Time Required for the Program
Although University regulations allow a five year time limit for MA degree completion and eight years for the PhD, (including the MA degree work), an MA student is normally expected to complete the degree in two years and a PhD student in three years after the MA. See "Graduate General Regulations" on page 243.

MA Program
Admission Requirements
Students must demonstrate adequate linguistics preparation. Those with little or no academic linguistics preparation may not obtain clear program admission or admission as a qualifying student. See "1.3.5 Admission Under Special Arrangements" on page 244 and "1.3.4 Admission to a Doctoral Program" on page 244 in the Graduate General Regulations for general admission requirements.

Areas of Specialization

Credit and Research Requirements
Course Work
Students must complete at least 20 credit hours of graduate course work in Linguistics, including LING 800, 801 and 851.

Thesis
All students must complete an MA thesis based on original research, and must comply with University regulations on completing and defending the thesis.

Language Requirements
Candidates must show a high competence in at least one language other than English.

PhD Program
Admission Requirements
Students must demonstrate a substantial background in linguistics and research methodology. Direct PhD program admission without an MA in linguistics, or equivalent is normally not possible. For general admission requirements, see "1.3 Admission" on page 243 of the Graduate General Regulations.

Areas of Specialization

Credit and Research Requirements
These requirements are beyond those of the MA requirements. Students may need to take specified courses from the MA program requirements as a condition of admission to the PhD program.

Course Work
Students complete at least 16 linguistics credit hours (four courses), approved by the supervisory committee. Normally only one course may be a directed research course.

Thesis Proposal
Each candidate must submit a written thesis proposal to the supervisory committee which defines the intended original research and the relationship between it and existing scholarship. After submission, the student presents the proposal at a departmental colloquium no later than the end of the ninth residence term. The written proposal must be approved by the supervisory committee prior to the start of substantive research.

PhD Thesis
Students must complete the thesis according to regulations.

Language Requirements
Candidates must show high competence in two languages other than English, with some knowledge of the structure of at least one non-Indo-European language. The supervisory committee determines how to demonstrate this competence.

Department of Philosophy
4604 Diamond Building, 778.782.3343 Tel, 778.782.4443 Fax, www.sfu.ca/philosophy
Chair
M. McPherran BA, MA, PhD (Calif)
Graduate Program Chair
M. Hahn BA (S Fraser), MA (Br Col), PhD (Calif)
Faculty and Areas of Research
See "Department of Philosophy" on page 175 for a complete list of faculty.

K. Akins – philosophy of mind, philosophy of perception, philosophy of the cognitive sciences
S. Black – social and political philosophy, ethics, history of 17th century philosophy
M. Hahn – philosophy of mind, philosophy of language, history of early analytic and continental philosophy
P.P. Hanson – epistemology, philosophy of language, philosophy of science, philosophy of mathematics, philosophy of mind
P.T. Horban – philosophy of religion
K. Laird – philosophy of mind, metaphysics
J.S. McIntosh – philosophy of mind, philosophy of science, metaphysics
M. McPherran – ancient greek philosophy, history of philosophy, philosophy of religion, ethics/history of ethics
F.J. Pelletier – philosophy of language, logic and linguistics, cognitive science, automated theorem proving, artificial intelligence, formal and computational semantics
O. Scaglione – philosophy of science, epistemology, logic, rational choice theory
L. Shapiro – history of modern philosophy, feminism, philosophy of mind, epistemology, philosophy of personal identity
E. Tiffaney – ethical theory, philosophical psychology, philosophy of mind and language.

Application Procedures
Please see the departmental website (www.sfu.ca/philosophy) for application procedures and other graduate program details.

Graduate Course Disciplines
The department's graduate courses are divided into the following areas:

Metaphysics and Epistemology
PHIL 802, 803, 804, 805, 806

Logic and Formal Studies
PHIL 812, 813, 814, 815

Value Theory
PHIL 822, 823, 824, 825, 826
The following are Directed Studies courses.
PHIL 852, 853, 854, 855
PHIL 880, 881, 882, 883, 863, 864, 865, 898, 899, 998-0

The student whose undergraduate work does not satisfy these conditions may be required to complete additional undergraduate courses, or to enroll as a qualifying student before consideration for admission.

Degree Requirements
These requirements apply to all MA candidates.
- completion of six philosophy courses: one course must be the Pro-seminar; PHIL 880, taken in the first graduate study year; one course may be a 300 or 400 division undergraduate course with graduate studies committee permission, completed with a grade of A- or higher. The remainder must be graduate courses.
- demonstrated competence in formal logic up to standard metatheory for first order logic, or higher when relevant to the proposed research.

Distribution Requirements
The candidate completes at least one course in each area of philosophy: value theory; metaphysics and epistemology; history of philosophy. Taken together with upper division undergraduate courses taken previously or in addition to the MA requirement, a total of three courses in each area are required.

Extra Course Work
There is one additional course required.

Cumulative Grade Point Average
A CGPA of 3.5 is required.

PHIL 899

In this course, the student revises a paper to a standard publication in form and content for submission to a professional journal. The starting point is typically a paper from a previously completed graduate course. The resulting professional paper normally shall not exceed 30 pages. The course is completed under the direction of the senior supervisor.

Final Examination
There is a public final examination on the professional paper that was produced in PHIL 899.

Specialized Thesis Option
This option is intended for those who have a particular project and supervisor in mind when they enter the program, and especially those with interdisciplinary interests. It has the following specific requirements.

Program of Study
The student is normally accepted into the program with a well-defined project and course of study, and a permanent (as opposed to interim) senior supervisor. The project and course of study is approved by the departmental graduate committee prior to the student's first term of enrollment.

Relaxed Distribution Requirement
Up to three of the required courses projected in the course of study may be from outside the Department of Philosophy.

Thesis
The student submits and successfully defends a thesis, normally not more than 100 pages in length, that gives evidence of independent critical ability. The area of specialization is noted on the student's final transcript under Committee Decisions.

Classic Thesis Option
This option has the following specific requirements:

Course Distribution
The candidate completes at least one course in each area of philosophy: value theory, metaphysics and epistemology; history of philosophy.

Thesis
The student submits and successfully defends a thesis, normally not more than 100 pages in length, that gives evidence of independent critical ability.

PhD Program
Admission Requirements
See "1.3.4 Admission to a Doctoral Program" on page 244 for university admission requirements. In addition, the applicant is expected to have either a 3.33 cumulative GPA or a 3.5 GPA in third and fourth year philosophy courses. Honors degrees, where available, are preferred. The department pays close attention to letters of reference and writing samples. A student whose graduate work does not satisfy these conditions may be required to complete additional undergraduate courses, or to enroll as a qualifying student before consideration for admission.

Course Requirements
- completion of eleven philosophy courses: one course must be the Pro-seminar; PHIL 880, taken in the first graduate study year; two courses may be a 300 or 400 level undergraduate course with graduate studies committee permission, completed with a grade of A- or higher. The remainder must be graduate courses.
- demonstrated competence in such foreign languages as the departmental graduate committee requires for the proposed research.

Canadian government and politics
S.J. MacLean – comparative development; political economy; African political economy
Students in the thesis stream complete four courses: POL 801 or 802 plus three additional courses from at least two of the three fields of study offered by the department. Students also must write a thesis, normally 18,750 to 25,000 words in length (plus bibliography) and defend it in an oral defence.

For field exam stream admission, students must submit, first to the supervisory committee and then to the appropriate department field committee, a field exam proposal outlining major and minor fields of study and a timetable for field exam completion. The field exam proposal is be approved by the supervisory committee. To fulfil the requirements, students complete POL 801 or 802 plus five additional courses from at least two of the three fields of study. Students also pass two written field exams: one in their major and one in their minor field of study. The supervisory committee serves as the nucleus of the field examination committee. With the student's consultation, the supervisory committee will be expanded to include additional examiners if necessary. Students who fail one field examination, and one only, may retake the failed field examination.

Admission Requirements
For general requirements see “1.3 Admission” on page 243. In addition, the department requires written statements of the student's current interests and proposed areas of research. Applications for graduate work will be considered with reference to the manner in which the proposed area of the candidate's research coincides with faculty teaching and research interests. See the list of faculty for general research interests. Should additional course work be deemed necessary, the graduate studies committee will indicate the same as a prerequisite.

A written statement of current research interests, three reference letters from qualified referees, and a sample of written work are also required.

Degree Requirements

MA Program

The program may be completed through an essay or project option, a thesis option, or a field exam option. Students are admitted to the essay or project option and require approval of the graduate program chair to transfer to another stream. Except in extenuating circumstances, students may only transfer once during the MA program.

In accordance with Graduate General Regulation 1.6.4, each student will be assigned a supervisory committee.

The essay or project option requires completion of either extended essays in two fields of study offered by the department or one research project. Students in the essay or project option complete five courses: POL 801 or 802 plus four additional courses from at least two of the department's three fields of study. A research project, to a maximum of 12,500 words (plus bibliography), must have substantial original content. Each extended essay is expected to elaborate upon course work, and research and is not to exceed 12,500 words (plus bibliography). Extended essays and research projects are defended in an oral defence.

To be admitted to the thesis stream, students must submit to the thesis supervisory committee a thesis proposal outlining a brief topic summary, its relevance, the methodology to be followed in the investigation, a chapter-by-chapter outline, a timetable for thesis completion and a select bibliography. The thesis proposal must be approved by the thesis supervisory committee.

PhD Program

The department offers specialized research resources in Canadian government and politics, comparative politics, and international relations with a thematic focus on issues of political economy, public policy and governance. However, the department may offer advanced study in other political science fields subject to the availability of faculty research expertise.

Admission Requirements
In addition to the minimum admission requirements (“1.3.3 Admission to a Master's Program” on page 243 of the Graduate General Regulations), a completed political science MA is required, normally with a minimum 3.67 GPA. How well the applicant's proposed research coincides with the department's focus on political economy, public policy and governance is an important consideration. Background deficiencies must be met by taking appropriate courses in addition to normal PhD work.

Admission applications are reviewed once a year by the department graduate studies committee. The program starts in September.

Supervisory Committee
In accordance with Graduate General Regulation 1.6.4, upon program admission, the departmental graduate studies committee assigns a senior supervisor.

Program Requirements
The PhD program consists of at least five graduate courses beyond the requirements of the MA plus a second language requirement, two comprehensive exams and a thesis.

Course Work
Students must successfully complete a minimum of five graduate courses. All courses are approved by the supervisory committee and reflect areas of specialization within the fields of political economy, public policy and governance as identified in the student's letter of intent. Students complete POL 801 or 802 or equivalent.

Language Requirement
Students must demonstrate a reading ability in a language other than English that is acceptable to the supervisory committee. Those studying subjects related to Canadian politics must demonstrate an ability to read French, determined by successful completion of a time limited exam consisting of a dictionary aided translation of a political science literature passage written in the language selected.

Comprehensive Examinations
Prior to thesis research, students must successfully pass two comprehensive exams that are administered by the Department of Political Science.

Thesis
Candidates successfully completing both comprehensive examinations are required to complete POL 890 which culminates with the student's presentation as a seminar to the department outlining his/her draft research proposal.

After the seminar, and in consultation with his/her supervisory committee, the candidate will prepare a final proposal for graduate studies committee approval. This proposal must receive the approval of the student's supervisory committee prior to being forwarded to the graduate studies committee. The research proposal will state the thesis title, topic, general intent, methodology and bibliography and will be accompanied by a detailed research plan and timetable for the completion of each thesis chapter. The thesis proposal normally should not exceed 2000 words in length, excluding bibliographic references.

The thesis should not be more than 300 pages and must represent an original contribution to the development of the discipline. The completed thesis must be successfully defended at an oral defence established in accordance with the Graduate General Regulations. See “1.9 Preparation for Examinations” on page 247) and “1.10 Examinations” on page 248).

Performance Evaluation
In accordance with the Graduate General Regulations (see “1.8 Progress, Withdrawal and Leave” on page 247), the student's progress is reviewed periodically by the graduate studies committee. At least once a year, the supervisory committee submits a written report on the student's progress to the graduate studies committee to aid its deliberations. Students judged to have maintained unsatisfactory progress may be asked to withdraw from the program.

Time Limits
Although Graduate General Regulation 1.12 (see “1.12 Maximum Time for Completion of the Requirements for the Degree” on page 249) establishes an eight year time limit for PhD completion, the department expects the PhD program will be completed within four to five years.

Department of Psychology

5246 Robert C. Brown Hall, 778.782.3354 Tel, 778.782.3427 Fax, www.psyc.sfu.ca

Chair
D.J. Weeks BA (Windsor), MSc (McM), PhD (Auburn)

Graduate Program Chair
R.T. Fouladi BA, MA, PhD (Br Col)

Faculty and Areas of Research
See “Department of Psychology” on page 179 for a complete list of faculty.

K. Bartholomew – adult attachment, abuse in intimate relationships, male same-sex relationships
M. Blair – concept acquisition, perceptual learning, attention, computational modeling, expertise, cognitive science
J. Carpendale – social cognitive development, moral development and cognitive development
A.L. Chapman – dialectical behavior therapy (DBT), emotion regulation, borderline personality disorder (BPD), impulsive and self-damaging behavior, mindfulness and acceptance, behavioral therapy, personality theory
R.J. Cobb – role of social support and attachment in the development of marriage, prevention of marital distress and dissolution, the effects of the marital context on child development, dating relationships
D. Connolly – psychology and law, children and the law, children’s autobiographical memory, eyewitness memory
D.N. Cox – health psychology, sport psychology, forensic psychology, cognitive behavior therapy
K.S. Douglas – violence, risk assessment and management, mental disorder and violence, forensic assessment, law and psychology
R.T. Fouadli – multivariate statistics, statistical modelling, measurement, health psychology
S.D. Hart – psychology and law, psychology of mentally disordered offenders, violence, wife assault, psychological assessment, personality disorder
G. Farocci – developmental psychopathology, autism, development of visual attention and perception, risk and resilience
A. Young – child psychopathology, anxiety, learning disabilities

Associate Members
For areas of research, refer to the department listed.

R.R. Corrado, Criminology
A. Horvath, Education
M. Jackson, Criminology
J. Martin, Education
N. O’Rourke, Gerontology
F.J. Pelletier, Philosophy
J. Sugarman, Education

Advisor
Ms. A. Turner, 778.782.4367, anita_turner@sfu.ca

Overview of Graduate Training
The department offers graduate programs culminating in MA and PhD degrees in either experimental or clinical psychology. The department is organized around five areas of concentration: cognitive and biological psychology, developmental psychology, law and forensic psychology, social psychology, and theory and methods. All graduate students work on research projects within one of these general research areas. In the experimental program, training is research-intensive and intended to produce PhD level researchers. The clinical PhD program offers area specializations in child clinical, clinical forensic, and clinical neuropsychology. Area specializations are noted on transcripts.

Application and Admission Requirements
Applicants must submit all supporting documents in one complete package. Submission of research interests with proposed supervisors, two copies of official transcripts of all post-secondary course work, three academic referee forms with supporting letters, Graduate Record Examinations [GREs], a CV, a check list, an abstract, and a personal statement. GRE and TOEFL scores can be submitted separately but must be received by the departmental deadline. Refer to the department’s website for yearly deadlines and details about the application process (http://www.psyc.sfu.ca/grad/index.php?topic=applications). Incomplete application packages will not be considered.

All applicants must complete an online application form available from the Dean of Graduate Studies website (http://www.sfu.ca/gradstudents/applicants). The online application is received in the department after the application fee of $75 is processed (application fee is subject to change). The department reserves the right to admit only those for whom research space and appropriate faculty supervisors are available.

Application as Special Student
Admission requirements for special students are outlined in the Graduate General Regulations (see 1.3.5 Admission Under Special Arrangements). Applicants apply online on the Dean of Graduate Studies website (http://www.sfu.ca/gradstudents/applicants). The online application is received in the department by the graduate program assistant after the application fee of $75 is processed (application fee is subject to change). Students seeking admission as a special student must also submit all preparatory transcripts to the graduate program assistant no later than one month prior to the term in which they plan to undertake the proposed course of study. Applicants must obtain written permission from the instructor of each course they wish to take. Special students taking psychology graduate courses must obtain a minimum B- grade in each course to be admitted as a special student in subsequent terms.

Satisfactory Performance
Each graduate student’s performance in research and course work is assessed at least once a year, with a formal annual review being conducted every spring. Each student receives feedback on his/her progress following this review. It is the policy of the psychology department that a grade of less than B (3.0) on any course is deemed unsatisfactory. Any graduate student who obtains a grade of less than B (3.0) in two or more courses in the preceding calendar year, or who fails to maintain a cumulative grade point average (CGPA) of at least 3.5, may be required to withdraw from the program.

A clinical student whose behavior raises the question of possible violations of the ethical codes binding the profession (CPA Code of Ethics, APA Ethical Principles, and CPBC Code of Conduct) will be advised of the nature of the problem behavior in writing, and invited to meet with the clinical committee in a confidential closed session to determine the facts. Access to clinical clients may be immediately suspended pending the outcome of this meeting. The student will be invited to present any information and to respond to any questions. Whether or not the student attends, the committee members subsequently will meet in camera to consider the facts, and to decide on a recommendation to make to the graduate studies committee (GSC). Possible outcomes of this process include limitation of clinical training work, restriction of contact with clinical clients or research participants, remedial work, and recommendation of termination from the program.

A student may appeal the decision to the graduate studies committee of the Department of Psychology, or to the GSC. The GSC will adjudicate the appeal using procedures outlined in University Graduate Regulation “1.8.2 Review of Unsatisfactory Progress.” The grounds for appeal are errors or unfairness in the procedures followed. Issues pertaining to the academic performance of the experimental program are subject to the same codes of conduct and will follow the same procedures as described above, but will be handled directly by the graduate studies committee.

MA Thesis
Students are required to present a written thesis proposal to their supervisory committee before the end of their fourth term in the program. After the thesis has been submitted, an oral defence will be scheduled. Students are expected to have completed their MA thesis by the end of their second year in the program. For further information and regulations, see Graduate General Regulations 1.9.2.

PhD Dissertation
Before starting dissertation research, the candidate presents a formal evaluation proposal. The candidate must present a dissertation proposal before the end of the third program year, and is expected to complete the PhD dissertation within four years of program entrance. The completed dissertation will be defended in oral examination. Judgment will be made by an examining committee. For further information, see Graduate General Regulations 1.9.4.
Supervisory Committees
For the MA thesis, students establish a supervisory committee before the end of their first term. The MA supervisory committee will consist of at least two Department of Psychology faculty, one of whom will be the senior supervisor and committee chair. Other faculty outside the department who are considered necessary by the student and senior supervisor may serve on the committee. For the PhD dissertation, students establish a supervisory committee by the end of the first term following program admission. The PhD supervisory committee will consist of a Department of Psychology faculty member who will be the senior supervisor and committee chair, and two or more additional members, at least one of which must be from the Department of Psychology. One member must act as advisor for measurement and design aspects of the dissertation research.

Program in Experimental Psychology
This program provides specialized training in: cognitive and biological psychology, developmental psychology, law and forensic psychology, social psychology, and theory and methods.

Degree Requirements
MA students must achieve satisfactory performance in PSYC 824, 910, 911, two breadth courses, and a minimum of two area courses, and must complete an MA thesis (PSYC 898). PhD students must complete a minimum of two area courses, comprehensive examinations, and a doctoral dissertation. The required courses and comprehensive exams must be completed within two years of PhD program entrance. In addition, students must participate in area research seminars (PSYC 913, 914, 916, 917 or 918) during their MA and PhD programs and to complete the requirements of their area of specialization.

Experimental Area Requirements

Cognitive and Biological Area
area course 1
area course 2
area course 3
area course 4
Additional Requirements
PSYC 913-1.5 Research Seminar
*area courses are determined for each student individually and may include courses both from within and outside the department.

Developmental Area
PSYC 750-5 Proseminar in Developmental Psychology (area course 1)
PSYC 950-5 Seminar in Developmental Psychology (I) (area course 2)
PSYC 944-5 Seminar in Psychopathology (area course 3)
PSYC 950-5 Seminar in Developmental Psychology (II) (area course 4)
Additional Requirements
PSYC 950-5 Seminar in Developmental Psychology (III)*
PSYC 819-3 Ethics and Professional Issues
PSYC 914-1.5 Research Seminar
*to be taken in year four

Law and Forensic Psychology Area
PSYC 790-5 Proseminar in Law and Psychology (area course 1)
PSYC 815-3 Mental Health Law and Policy (area course 2)
PSYC 810-3 Seminar in Social Psychology and Law (area course 3)
PSYC 990-3 Seminar in Law and Psychology (I) (area course 4)

Additional Requirements
PSYC 990-3 Seminar in Law and Psychology (II)
PSYC 887-3 Research Project in Law and Psychology/Forensic Psychology
PSYC 892-3 Research/Policy Practicum in Law and Psychology
PSYC 916-1.5 Research Seminar

Social Area
PSYC 760-5 Proseminar in Social Psychology (I) (area course 1)
PSYC 760-5 Seminar in Social Psychology (II) (area course 2)
PSYC 960-5 Seminar in Social Psychology (II) (area course 3)
PSYC 960-5 Seminar in Social Psychology (II) (area course 4)
Additional Requirements
PSYC 819-3 Ethics and Professional Issues
PSYC 917-1.5 Research Seminar

Theory and Methods Area
area course 1
area course 2
area course 3
area course 4
Additional Requirement
PSYC 918-1.5 Research Seminar
*area courses are determined for each student individually and may include courses both from within and outside the department.

As well, students will typically be required to take more than four area courses.

Program in Clinical Psychology
The PhD program, accredited by the Canadian Psychological Association and the American Psychological Association, is based on the scientist-practitioner training model. The program provides generalist training and specialization streams in child-clinical psychology, clinical-forensic psychology, and clinical neuropsychology, with notation on transcripts. Standing in the program is contingent upon maintenance of satisfactory performance in course work, thesis work, practicum skills development, comprehensive exams, and adherence to professional ethical standards (CPA Code of Ethics, APA Ethical Principles, and CPBCC Code of Conduct), as evaluated in the annual review of student progress. Unsatisfactory academic progress and/or CPA ethical code of conduct violations (e.g. dishonesty, boundary violations, etc.) may lead to withdrawal from the clinical program.

In addition, all students are members of one of the following five research areas: cognitive and biological, developmental psychology, law and forensic psychology, social psychology, and theory and methods.

Degree Requirements
MA students must complete satisfactorily: PSYC 744, 770, 820/821, 822/823, 824, 880 (Practicum), 910, 911, 898 and two area courses.
PhD students must complete PSYC 600, 819, the ethics oral comprehensive examination, one breadth course (see Breadth/Domain Requirements below), two area courses, two advanced topic courses (PSYC 806 assessment, PSYC 807 intervention, or PSYC 809 applied psychology) depending upon specialization, PSYC 999 (comprehensive examinations in assessment, personality, psychopathology, clinical research design, intervention and ethics), PSYC 886 Internship, and PSYC 899 PhD Thesis.
Students will not be permitted to enroll in PhD course work beyond the seventh term in the MA program, until the MA thesis is complete, or they receive joint approval from their senior supervisor and the director of clinical training.

Students are required to enroll in PSYC 825 (ongoing clinical training) every term prior to internship (PSYC 886) except when formally exempt.

In addition, students must participate in area research seminars (PSYC 913, 914, 916, 917 or 918) during their MA and PhD programs and to complete their area of specialization requirements.

Students successfully defend dissertation proposals before applying for internship (by October 1st).

Breadth/Domain Requirements

Developmental Area: Child Clinical Stream
PSYC 750-5 Proseminar in Developmental Psychology (area course 1)
PSYC 830/831-3/2 Practicum in Child Evaluation and Treatment Formulation (area course 2)
PSYC 944-5 Seminar in Psychopathology (area course 3)
PSYC 807A-5 Advanced Topics in Intervention: Child Therapy (area course 4)

Additional Requirements
PSYC 807B-5 Advanced Topics in Intervention: Family Therapy
PSYC 914-1.5 Research Seminar

Law and Forensic Psychology Area: Clinical Forensic Stream
PSYC 790-5 Proseminar in Law and Psychology (area course 1)
PSYC 815-3 Mental Health Law and Policy (area course 2)
PSYC 835-3 Special Topics in Clinical Forensic Psychology (area course 3)
PSYC 836-3 Special Topics in Criminal Forensic Psychology (area course 4)

Additional Requirements
PSYC 897-5 Research Project in Law and Psychology/Forensic Psychology
PSYC 890-3 Practicum in Clinical Forensic Psychology
PSYC 916-1.5 Research Seminar

Cognitive and Biology Area: Clinical Neuropsychology Stream
PSYC 806-3 Advanced Topics in Assessment: Neuropsychological Assessment (area course 1)
PSYC 882-3 Neuropsychology Practicum
PSYC 907B-3 Advanced Topics in Biological Psychology: Neurocognitive Disorders (area course 2)
PSYC 907F-3 Advanced Topics in Biological Psychology: Cognitive Neuroscience (area course 3)
UBC Neuroanatomy 516 (area course 4)
PSYC 913-1.5 Research Seminar

SFU/UBC Law and Forensic Psychology Stream
The Simon Fraser University Program in Law and Forensic Psychology, in co-operation with the University of British Columbia, offers students in forensic psychology the option of completing both a PhD and an LLB degree. Students completing the co-operative PhD/LLB stream will specialize in either...
experimental psychology and law, or in clinical forensic psychology. This program permits students to be on-leave from one university while completing requirements in the other. At present, two courses are eligible for credit in both degree programs.

All university and department MA and PhD requirements of Simon Fraser University must be met. Students admitted to the co-operative SFU/UBC stream complete the requirements for both a PhD in law and forensic psychology, and an LLB in law. For application and admission information for the PhD degree at Simon Fraser University, see the Department of Psychology’s Application and Admission Requirements. Applicants seeking the LLB degree must apply separately to the Faculty of Law at UBC.

The PhD is awarded by Simon Fraser University’s Faculty of Arts and Social Sciences, and the LLB is awarded by UBC’s Faculty of Law. Students must satisfy all requirements for both the PhD and LLB degrees.

Public Policy Program
3271 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.5289 Tel, 778.782.5288 Fax, www.sfu.ca/mpp, mpp@sfu.ca

Director
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Senior Policy Fellow
D. McArthur BSc (Sask), MA (Tor), MA (Oxf)

Professors
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J.G. Richards BA (Sask), BA (Camb), MA, PhD (Wash, Mo)

Associate Professors
D.M. Gross Licence en Sciences Economique (Lausanne), MA (Carl), PhD (Tor)
O.A. Hankivsky BA (Tor), MA, PhD (WOnt)

Assistant Professor
E.C. Stewart BA (Acadia), MA (S Fraser), PhD (LSE)

Adjunct Faculty
B. Laplante BComm, MSc (Montr), PhD (Gu)
T. Penikett BA (WOnt)
M. Shaffer BA (McG), PhD (Br Col)

Steering Committee
L. Dobuzinskis, Political Science
I. Geva-Milstein, Education
M. Howlett, Political Science
D. McArthur, Public Policy
C.A. Murray, Communication
N.D. Olewiler, Economics
J.G. Richards, Business Administration
E.C. Stewart, Public Policy
A.R. Vining, Business Administration

This program offers the skills, insights and analytical frameworks that public sector and non-profit policy analysts and managers need to prepare for their careers. It focuses on the political and economic contexts of public policy analysis and offers specialized study in many policy areas. Designed to develop the strategic and global perspective required of tomorrow’s senior policy analysts and managers, the program uses a cohort model. Students take courses in the same sequence which encourages student interaction and co-operation. An individual research project undertaken in MPP 808 and 809 (advanced policy analysis) is an integral part.

Master’s Program
This full-time two year cohort program, leading to a master of public policy (MPP), consists of fourteen courses plus a summer co-op/internship. Courses are sequenced through the fall and spring terms. The maximum course load is four courses per term.

Admission Requirements
To be considered for admission, applicants must have a bachelor’s degree from a recognized university. Those admitted with other credentials, or those with degrees who, in the judgement of the program director are without adequate foundation in the social sciences, may be required to make up any deficiency without receiving graduate credit for those courses. Students are normally admitted in September. It is expected that approximately 25 students will be directly admitted in any one year.

The normal minimum undergraduate GPA required for admission is 3.0 (or equivalent), although the admissions committee and program director may take relevant work experience into account when determining program admission eligibility.

Criteria for admission, in addition to undergraduate grades, include strong letters of reference, an essay, and for those whose native language is not English, acceptable TOEFL scores (570 minimum) and a score of 5 or above on the Test of Written English. Students with non-Canadian undergraduate or graduate degrees are required to take the Graduate Record Exam (GRE).

Application Requirements
The following application documentation is required.

• A Simon Fraser University graduate application form, which is available from the Public Policy Program office or can be downloaded from www.sfu.ca/mpp
• The applicant’s official undergraduate transcript showing all grades (mailed directly from the granting institution)
• Three confidential letters of reference (mailed directly from referees), at least two of which are from university faculty members. This requirement may be waived for mid-career applicants with professional experience. In this case, letters from employers may be used. Reference forms are available from the office or from www.sfu.ca/mpp
• A one-page essay that explains why the applicant wishes to pursue the MPP degree

Program Requirements
The candidate must complete a total of ten core MPP courses, a summer co-op/internship, plus four additional elective courses that must be approved by the Public Policy Program director.

Year One
Students complete the following eight core courses.

MPP 800-5 Introduction to Public Policy Issues
MPP 801-5 Economic Foundations of Policy Analysis I
MPP 802-5 Economic Foundations of Policy Analysis II
MPP 803-5 Political Foundations of Policy Analysis I
MPP 804-5 Political Foundations of Policy Analysis II
MPP 805-5 Research Techniques and Quantitative Methods I
MPP 806-5 Research Techniques and Quantitative Methods II
MPP 807-5 Introduction to Policy Analysis

In the summer term, the co-op/internship course MPP 850 is completed.

Year Two
Students complete the following two core courses.

MPP 808-5 Advanced Policy Analysis I
MPP 809-5 Advanced Policy Analysis II

In addition, four elective courses are required. The program director, in consultation with the student, selects appropriate graduate courses that are offered by affiliated programs and departments. To satisfy these elective requirements, and when appropriate, students may choose from the following MPP courses.

MPP 810-5 Issues in Public Policy I
MPP 811-5 Issues in Public Policy II
MPP 812-5 Selected Topics in Public Policy I
MPP 813-5 Selected Topics in Public Policy II
MPP 825-5 MPP Directed Readings I
MPP 826-5 MPP Directed Readings II

Publishing Program
3576 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.5242, 778.782.5239 Fax, www.cccsp.sfu.ca

Director
R.M. Lorimer BA, MA (Manit), PhD (Tor)

Professor
R.M. Lorimer BA, MA (Manit), PhD (Tor) – publishing policy

Assistant Professor
J. Maxwell BA (Br Col), MPub (S Fraser), PhD (Br Col) – technology

Associate Members
A.C.M. Beale, Communication – history of communication
R.M. Cee, English – rhetoric and composition
A. Cowan, Continuing Studies – publishing education, editing and production
L. Copeland – Library
C. Gerson, English – history of Canadian publishing
M.A. Gillies, English – Victorian publishing
M. Jordan – Library
G.A. Mauser, Business Administration – marketing
B. Owen BA (S Fraser), MA (Br Col)
R. Smith, Communication – information technology

Adjunct Faculty
B. Barnes, BA (Cumb) – economics, marketing consultant
R. Brighurst, BA (Indiana), MFA (Br Col) – Author
J.J. Douglas, LLD (S Fraser) – retired publisher, Douglas and McIntyre
N. Flight, BA (Denison), MA (Brym Mawr) – associate publisher, Greystone
D. Gibson, MA (St. Andrews), MA (Yale) – publisher, McClelland and Stewart
C. Good, BA, MA (Tor) – editor
R. Hancox, Dip (Regent St. Polytechnic, London), PMD, Neiman Fellow (Harv), Professional Fellow
A. MacDougall – president, Raincoast Books
P. Milroy, BA (Ont) – publisher, UBC Press
S. Osborne, BA (Br Col) – publisher, Geist Magazine
M. Schendlinger – editing
K. Siegler, BA, MA (S Fraser) – publisher, Talon Books
M. Sosteric, BA, MA (Regina), PhD (Alta) – assistant professor, Athabasca University
R. Touchie BA (Windsor), MA Br Col – publishing management
P. Whitney, BA (Sask), MLS (Br Col) – chief librarian, Vancouver Public Library
J. Willinksy BA (Laurentian), MEd (Tor) PhD (Dal)

Advisory
Ms. J. Ray BA (S Fraser), 3576 Simon Fraser University Vancouver, 778.782.5242, jray@sfu.ca
This program leads to a master's degree in a recognized university or the equivalent. In addition, applicants will be required to:

- have some demonstrated familiarity with the publishing industry
- be familiar with the operation of both Apple and IBM compatible microcomputers
- demonstrate a suitable level of competence in editing and proofreading
- be familiar with the major concepts of marketing and accounting
- demonstrate a suitable level of competence in English composition

Entering students are expected to have a minimum knowledge of publishing which will be assessed through an examination of documents and experience. In some cases, interviews and examinations. Should candidates be found not to have the knowledge, understanding, and skills necessary, they may gain those skills by successfully completing the following courses or their equivalents.

- BUS 251-3 Financial Accounting I
- BUS 254-3 Managerial Accounting I
- BUS 343-3 Introduction to Marketing
- CMNS 371-4 The Structure of the Book Publishing Industry in Canada
- CMNS 372-4 The Publishing Process

The following course is valuable background as a foundation for editing.

- ENGL 375-4 Studies in Rhetoric

Satisfactory Performance

The progress of each student is assessed at the end of each term. A course grade of less than B is considered unsatisfactory. Any student who obtains a grade of less than B in two or more courses may be required to withdraw from the program.

Degree Requirements

Course Work

Students complete 37 credit hours in addition to an internship and project report. The curriculum is composed of courses offered exclusively within the program. The director may recommend that some students substitute courses from Simon Fraser University or other institutions, and/or experience and demonstrate expertise for program courses.

Internship and Project Report

A key component is an internship and project which integrates the knowledge the student has gained with the demands of an applied setting. This internship is in the workplace, typically in industry, public institutions or government. An appropriate level of documentation and reporting is required. During the Internship, which generally last four months, the student receives academic supervision as required from the student's senior supervisor. day-to-day supervision is by designated industry supervisors who have appropriate qualifications and will be appointed by the University. In very small companies, alternate arrangements may be made.

The internship will focus on a specific student initiated project, by one or more members of the student's supervisory committee or by the industry supervisor's employer. The student submits an outline defining the project scope, plans for documentation and reporting, anticipated activities, schedule and conclusion. The outline is approved by the supervisory committee and program director. Commitment of the company or institution, the industry supervisor and the University will be formalized by a letter exchange.

The student produces two reports: a work report which is an appraisal of the student's work, and a project report which will be an investigation and analysis of a particular problem or case. The latter serves as a project record and interpretation.

The supervisory committee and director assess the project on the conduct of the project, work and report quality. There is no oral exam. However, a project report will be submitted (see "1.10.6 Examination of Projects Submitted in Partial Fulfillment of Degree Requirements" on page 249).

Department of Sociology and Anthropology

5053 Academic Quadrangle, 778.782.3518 Tel, 778.782.5799 Fax, www.sfu.ca/sociology

Chair

J. Pulkingham MA, PhD (Edin)

Faculty and Areas of Research

See "Department of Sociology and Anthropology" on page 181 for a complete list of faculty.

Y. Atasoy – political economy, globalization, political sociology, development studies, gender relations, cultural politics, Islamic politics, Turkey, Middle East

M. Boelcher Ignace – practice theory, language and culture, aboriginal resource management, aboriginal peoples of north western North America

J. Bogardus – critical anthropology, political sociology, critical pedagogy, participatory action research

W. Chan – feminist and critical criminology; racism, racialization, and criminal justice; immigration control; social exclusion; welfare fraud; violence against women; domestic homicides

D. Chunn – feminism and law; critical media and family studies; historical sociology of crime, madness and social welfare

D. Culhane – critical anthropology, anthropology of/and law and health, contemporary ethnography, visual anthropology

F. DeMaio – medical sociology, income inequality, quantitative methods, Latin America

P. Dossa – migration, gender and health, critical feminist anthropology, medical anthropology, aging and health policy, politics of disablement

N. Dyck – social, political, urban anthropology; sport, childhood, national identity; theories of tutelage, discipline

K. Froschauer – new Canadian political economy, ethnic relations and social movements

M. Gates – Mexico, Latin America, development, environment, narrative research

M. Hathaway – globalization and science, transnational organizations and networks, politics of the environment

L. Lacombe – contemporary social theory, sexuality and moral panic, deviance and social problems

A. McLaren – gender and intersectionality, sociology of education and families, family policy, immigration

B. Mitchell – families and aging, youth transitions, family relationships, health and well-being

G. Otero – states, nations and indigenous movements; sociology of agriculture and food, NAFTA, region and Latin America

C. K. Patton – social study of medicine, especially social aspects of AIDS and wilderness medicine, continental theory

S. Pigg – medicine, science and transnational processes; biomedicine modernity; AIDS; sexuality; reproductive health

J. Pulkingham – gender and the state; critical social policy studies; income security policy; gender, family law and divorce

G.B. Teeple – human rights, global division of labour, sociology of art, Marxism and sociological theory, political economy of Canada

A. Travers – sociological theory (feminist and queer), gender and technology, sociology of sport, social issues and movements

H. Wittmam – environmental sociology, social movements, food and society, qualitative methods, Brazil and Guatemala

J. Yang – linguistic and cultural anthropology, including contemporary China, post-socialism and neo-liberalism, development and environment

Four graduate programs are offered: MA in sociology, MA in anthropology, PhD in sociology, and PhD in anthropology.

The full-time master of arts (MA) programs offer comprehensive foundation in social theory in sociology and anthropology disciplines, and rigorous training in research methodologies, a particular strength of the department. The programs facilitate and support completion within two years, in six or seven terms. Graduates will be well prepared to enter doctoral (PhD) programs, and to hold professional positions in public, private and non-profit sectors.

Admission Requirements

See "1.3 Admission" on page 243 for general requirements. In addition to these requirements, the department also requires a written statement about current interests and prospective research. How well the applicant's proposed research coincides with the research and teaching interests of the faculty is an important admission consideration. PhD applicants must submit a work sample from earlier or ongoing graduate studies.

Admission applications are normally considered once each year at the end of January. The program commences in September. Contact the graduate program chair or secretary for further information.

Areas of Study

The department offers the following areas of study.

- anthropology and sociology of medicine, health and society (particularly politics of knowledge production, disability, mental health, AIDS)
- Canadian society (ethnic relations, demographic issues, social inequality, political economy)
- critical pedagogy
- development studies (especially the Third World, including studies of tourism and international health)
- environmental issues
- minority indigenous peoples (particularly Canadian Native peoples)
- political sociology (with emphasis on political economy, ethnic relations and social movements)
- social and cultural anthropology (with emphasis on the anthropology of contemporary life)
- social policy issues (aging, family relations, government administration of native peoples)
- sociological and anthropological studies of law and legal systems
- sociological theory, anthropological theory, and the philosophy of the social sciences (European intellectual history, holistic, comparative, historical and post colonial perspectives)
- sociology of agriculture, and science, technology and society
- sociology of sexuality and moral panic, and social problems and deviation

MA Program

The minimum requirements include eight one-term courses, and one ungraded MA research course (that
may extend over more than one term), for a total minimum of 37 credit hours, and one thesis.

**MA Anthropology**
For a master of arts in anthropology, students must complete all of:
- SA 840-1 Graduate Seminar I
- SA 841-1 Graduate Seminar II
- SA 856-5 Qualitative Methodology
- SA 875-5 Research Design Seminar
- SA 870-5 Contemporary Theory in Anthropology
- SA 874-5 Historical Perspectives on Anthropological Theory
- SA 896-6 MA Thesis Research

plus two elective courses totalling nine credit hours.

Normally, the program is completed within six terms.

Students complete eight one-term courses, six of which are the following discipline-specific required courses.

**MA Sociology**
For a master of arts in sociology, students must complete all of:
- SA 840-1 Graduate Seminar I
- SA 841-1 Graduate Seminar II
- SA 849-5 Selected Topics in the History of Sociological Thought
- SA 856-5 Selected Topics in Contemporary Social Theory
- SA 856-5 Qualitative Methodology
- SA 857-5 Research Design Seminar
- SA 896-8 MA Thesis Research

plus two elective courses totalling nine units, which may be chosen from:
- SA 886-5 Selected Problems in Social Analysis
- and/or the following discipline-specific courses, or the two additional elective courses may be chosen from a graduate course or graduate directed readings course in another Simon Fraser University department, or from another university altogether.

**Anthropology**
- SA 871-5 Readings in Anthropology I*
- SA 872-5 Readings in Anthropology II*
- SA 875-5 Ethnographic Methodology: Social/Cultural Anthropology

**Sociology**
- SA 853-5 Readings in Sociology I*
- SA 854-5 Readings in Sociology II*
- SA 855-5 Advanced Quantitative Methods in Sociology

*supervisory committee and departmental graduate program committee approval required

Students may be required to complete more than the eight required courses at the discretion of the supervisory committee. Required courses are normally completed within the first three terms of MA program enrolment.

**Qualifying Exam**

The thesis, completed by both anthropology and sociology students, will normally consist of no more than 75-100 pages, inclusive of bibliographies, appendices and tables. At the discretion of the supervisory committee, the maximum number of pages may be increased, normally only to facilitate the inclusion of large appendices and tables. The student's supervisory committee and a qualified external examiner will examine the thesis, and a public oral defense will be held. Theses are bound and placed in the library.

**PhD Program**

Students complete the following courses, and a PhD qualifying examinations course (SA 897) for a total of 37 credit hours.

Required courses, including qualifying examinations, and preparation and defense of the thesis prospectus, are normally completed within the first six terms.

Course requirements are the same whether the student has completed an MA in this department, or completed a comparable MA program at another university. However, the department's graduate program committee may make special arrangements so that required courses in theory and methodology are not repeated.

**PhD Anthropology (approx 32 credit hours)**

Anthropology students complete all six of:
- SA 840-1 Graduate Seminar I
- SA 841-1 Graduate Seminar II
- SA 856-5 Qualitative Methodology
- SA 857-5 Research Design Seminar
- SA 870-5 Contemporary Theory in Anthropology
- SA 874-5 Historical Perspectives on Anthropological Theory

and one of:
- SA 871-5 Readings in Anthropology I*
- SA 872-5 Readings in Anthropology II*
- SA 875-5 Ethnographic Methodology: Social/Cultural Anthropology

*supervisory committee and departmental graduate program committee approval required for these courses and/or extra-departmental courses

**PhD Sociology (approx 33 credit hours)**

Sociology students complete all seven of:
- SA 840-1 Graduate Seminar I
- SA 841-1 Graduate Seminar II
- SA 849-5 Selected Topics in the History of Sociological Thought
- SA 850-5 Advanced Sociological Theory
- SA 856-5 Qualitative Methodology
- SA 857-5 Research Design Seminar
- SA 897-6 PhD Qualifying Examinations

and one of:
- SA 853-5 Readings in Sociology I*
- SA 854-5 Readings in Sociology II*
- SA 855-5 Advanced Quantitative Methods in Sociology

*supervisory committee and departmental graduate program committee approval required for these courses and/or extra-departmental courses

**Qualifying Exam, Defence**

At the conclusion of SA 897, students must complete a written qualifying examination. After successfully completing the qualifying exam, and prior to commencement work on the thesis, students defend a written prospectus that the student has prepared during SA 857. This oral defense is public.

**Graduate Seminar**

All full-time graduate students must attend and actively participate in the graduate seminar during their first two program terms. In subsequent terms, attendance and enrolment is voluntary. Special arrangements will be made for part-time students to fulfil this requirement.

**Language Requirement**

Although a knowledge of French or foreign languages is desirable for advanced studies, there is no prescribed language requirement. However, where a language other than English is necessary for field work or reading, proficiency will be required.

**Co-operative Education**

In this program students gain work experience that complements their academic studies. MA students in good standing with a minimum 3.0 GPA may apply after satisfactory completion of SA 850 or 870, and 857 plus one (thesis option) or two (extended essay or research project option) of SA 853, 854, 871, 872, 896, or equivalent. Supervisory committee recommendation and departmental graduate program committee approval is required. Students may take the traditional two separate work term co-op program, or the three consecutive work term co-op internship. Arrangements are made through the faculty's co-op co-ordinator at least one term prior. See page 237.

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**Urban Studies Program**

3274 Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3
778.782.7914 Tel, 778.782.5297 Fax, urban@sfu.ca, www.sfu.ca/urban

**Director**
A. Perl AB (Harv), MA, PhD (Tor)

**Associate Professor**
K. Ferguson BA (McG), MA, PhD (Duke)**

**Assistant Professor**
P.V. Hall BSocSc (Cape Town), MSoc (LSE), PhD (Calif)**

**Associate Professor**
M. Holden BSoc (Vic, BC), MSc (Rutgers), PhD (New School, NY)*

**Steering Committee**

N. Dyck, Sociology and Anthropology
L.J. Evenden, Geography
K. Ferguson, History
W.G. Gill, Vice-President, University Relations
P.V. Hall, Urban Studies
M. Holden, Geography, Urban Studies
G. Price, City Program
M. Roseland, Geography
P.J. Smith, Political Science
E.C.K. Stewart, Public Policy Program

*joint appointment with history
**joint appointment with sustainable community development

**Advisor**
Ms. T. Evans BA (Manit), MA (S Fraser)

The city is a central feature of modern societies and economies. The development of cities over the past 500 years has enabled the evolution of the modern world. Academic interest in urban studies spans many disciplines and focuses on understanding cities, how they function, and how they change for the better.

This program develops the knowledge, skills and understanding that individuals, organizations, communities and governments can use to improve human lives, strengthen municipal governance and advance urban sustainability. In this program students seek to understand, develop and diversify the structures, processes and actions that will make cities livable, now and well into the future. The curriculum integrates traditional understandings with new perspectives, both locally and globally.

Programs are available to both full-time and part-time students, ranging from mid-career professional to those who are simply curious about local politics.
urban development, and sustainable cities. The program provides a strong foundation in economic, geographic, political and social analysis techniques and applies these skills to real-world urban problems. Courses are offered in the evenings at Simon Fraser University Vancouver, located in the core of British Columbia’s principal urban centre.

**Master's Program**

This program requires 32 credit hours of URB courses, including the following required courses:
- URB 670-4 Urban Research Methods
- URB 696-4 Seminar in Urban Studies
- URB 697-4 Research Project

These courses help students prepare an original urban research project to demonstrate integration of concepts and techniques acquired in previous course work. Up to two other graduate courses beyond those offered by Urban Studies may be substituted with the approval of the Urban Studies program committee.

**Graduate Diploma in Urban Studies**

The graduate diploma augments an undergraduate degree by providing exposure to, and development of urban expertise and insights. The graduate diploma requires completion of 24 credit hours of URB courses. One or two graduate courses from other departments may be substituted with permission.

**Admission Requirements**

Applicants for admission are normally required to have an undergraduate degree in one of the urban studies base disciplines (economics, geography, political science, sociology and anthropology). Applications from students with other degrees or with equivalent professional training and experience will also be considered. Admissions decisions will be based on material submitted with the application.

**Application**

Applicants must submit the following documentation:

- Application for Admission to Graduate Studies
- Official copy of transcript of undergraduate grades (mailed directly from the granting institution)
- Three confidential reference letters (mailed directly from referees, one of whom should be an academic)
- A statement of the applicant's program interest
- TOEFL and TWE test scores may be required for applicants whose first language is not English

**Financial Assistance**

Limited student financial assistance is available.

**Department of Women's Studies**

5102A Academic Quadrangle, 778.782.3333 Tel, 778.782.5518 Fax, www.sfu.ca/womens-studies

**Chair**

M.L. Stewart (Calg), MA, PhD (Col)

**Graduate Program Chair**

M. MacDonald BEd (Quj), BSc (MtAll), PhD (WOnt)

Ruth Wynn Woodward Endowed Chair

K. Braid BA (MtAll), MA (S Fraser), MFA (Br Col)

**Faculty and Areas of Research**

See “Department of Women’s Studies” on page 187 for a complete list of faculty.

**L. Campbell, Women's Studies – Canadian women's history, social justice, social welfare**

M. Griffin Cohen, Political Science – feminist economics, public policy

H. Leung, Women’s Studies – queer theory and feminist theory; gender and sexuality in Asian cinemas; literacy and cultural studies

J. Levitin, Contemporary Arts – women and film: theory and production; women and popular culture; women and comedy; Third World film and women

M. MacDonald, Women’s Studies – feminist critiques of gender equity in science and technology; ecofeminist analyses of the professionalization of environmental caring

J. Marchbank – higher education; politics of care; social justice; gender-related issues

C.K. Patton – sociology and anthropology; health; HIV/AIDS; methodology and methods training; social study of medicine

M.L. Stewart, Women’s Studies – women in Europe; French fashion and beauty industry

H. Zaman, Women’s Studies – women and work in comparative perspective; gender and development; feminist research methods; women of color and Canadian feminism; Third World

**Associate Members**

For areas of research, refer to the department listed.

M. Bubber, Library

B. Burtch, Criminology

P. Dossa, Sociology and Anthropology

O. Hankivsky, Political Science

J. Matsuura, History

A.T. McLaren, Sociology/Anthropology

K. Mezei, English

M.H. Morrow, Health Sciences

The master's program in women's studies is an interdisciplinary program and it is possible, therefore, for the master's student, in cooperation with the women's studies graduate committee, to create an individualized program of studies to suit the student's scholarly interests and goals.

The program is designed to lead to a strong academic research degree. Students will be expected to develop and demonstrate intellectual and analytical skills within a specific area of study.

The program recognizes the special needs of those already working who may wish to improve their qualifications. Some graduate courses may be offered at night, and part time students are permitted.

**Master's Program**

**Admission Requirements**

Applicants must satisfy the women's studies graduate committee, to create an interdisciplinary program of studies to suit the student's scholarly interests and goals.

The program is designed to lead to a strong academic research degree. Students will be expected to develop and demonstrate intellectual and analytical skills within a specific area of study.

The program recognizes the special needs of those already working who may wish to improve their qualifications. Some graduate courses may be offered at night, and part time students are permitted.

**Degree Requirements**

The student normally will complete the following requirements.

- A minimum of 20 credit hours of graduate seminar, including at least one of WS 800 or 822, maintaining at least a 3.0 CGPA, and
- Submit a thesis or two extended essays showing independent research and critical abilities. An MA thesis is expected to be an in-depth empirical or theoretical study. The normal thesis length is 60-120 pages. Extended essays are defined as scholarly papers that meet the same standards of excellence as a thesis; they are examined in the same way, prepared in the same format, bound, and placed in the Library. Normally, the length of each essay is 30-60 pages. The extended essays are expected to demonstrate a breadth of knowledge and competence over several areas of study.

The student will be required to take an oral examination on her or his thesis or papers at the end of the MA program. See "1.9 Preparation for Examinations" on page 247.

- The student must complete six graduate courses, one of which must be WS 822, and maintain at least a 3.0 CGPA.
- The student is also required to write two examinations based upon the subject areas of two of the completed Women's Studies courses.

Upon admission, the student will be assigned a two member advisory committee which has the responsibility for ensuring that the student fulfills all degree requirements. For further information concerning requirements, consult the departmental graduate handbook.

**Supervisory Committee**

Following the student’s enrolment, a supervisory committee will be formed which has responsibility for determining, in consultation with the student, the projected program of study, selecting appropriate research topics, and ensuring that the candidate fulfills all degree requirements. The senior supervisor will be selected from joint appointees in women’s studies and continuing faculty members on the co-ordinating committee. Other faculty outside the department who are considered necessary by the student and her/his supervisors may also be added to the committee.

**Doctoral Program**

**Admission Requirements**

Applicants must satisfy the women’s studies graduate program committee that they are prepared academically to undertake graduate level work in women’s studies.

In addition to University requirements, listed in the Graduate General Regulations section, the program requires

- A sample of scholarly work in the form of a substantial essay which is scholarly in format and approach. The paper submitted may be an undergraduate essay previously prepared, or one specially written for this purpose.
- A short statement of interests and goals in women’s studies; normally students will be expected to present a definite proposal for their research.
- A short description of previous relevant course work and/or employment. Previous work should include both specialized disciplinary training and broader interdisciplinary exposure attended with women.
- A student will be admitted into a specific option (thesis, two extended essays or course intensive) and should apply to that option.

Qualified students will be accepted into the MA thesis option only if a suitable senior supervisor is available and willing to supervise the student. Senior supervisors will be selected from joint appointees in women’s studies and continuing faculty members on the co-ordinating committee of the Department of Women’s Studies including associate members.

A student can switch from one option to another only with the approval of the graduate program committee. A student can transfer to the thesis option only if there is a suitable supervisor available. A student with incomplete academic preparation for the MA program may be required to take up to 12 credit hours of additional work in either women's studies or another relevant program.

The graduate committee, which will deal with admissions and all matters pertaining to individual students, will consist of all continuing faculty members on the co-ordinating committee.
required. Applicants are required to submit three letters of reference.

In addition to University requirements for admission to a doctoral level program, as listed in the Graduate General Regulations (see “1.3.4 Admission to a Doctoral Program” on page 244), the program requires:

• a sample of scholarly work in the form of a substantial essay which is scholarly in format and approach
• a short statement of research interests and goals in women’s studies; normally students will be expected to present a definite proposal for their research
• a short description of previous relevant course work and/or employment. Previous work should include both specialized disciplinary training and broader interdisciplinary work concerned with women and/or gender.

Degree Requirements

Normally, the student will complete the following requirements.

• Students must complete three graduate courses. The graduate committee, in consultation with the student’s supervisory committee, may require a student to take additional courses, either to obtain breadth of background in women’s studies or to acquire specific preparation in the topic of the student’s proposed thesis. Two of any required courses may be from women’s studies at the University of British Columbia (UBC) or relevant offerings in other Simon Fraser University or UBC departments, with the approval of the student’s supervisory committee. Students who have completed the Simon Fraser University or UBC master of arts program before admission to the doctoral program will not be permitted to duplicate graduate courses that they completed during their MA programs.
• Students must pass comprehensive examinations that consist of three major scholarly/professional tasks to be set by the student’s supervisory committee in consultation with the student, approved by the women’s studies graduate committee, and completed to the satisfaction of the supervisory committee. One of the three tasks must be an exam or a review of the literature.
• Students prepare a PhD thesis proposal and defend it in a presentation that is open to the whole department.
• Students will submit a PhD thesis giving evidence of independent research and critical abilities in the interdisciplinary study of women and/or gender. The student will be examined on the thesis in accordance with the Graduate General Regulations (see “1.9.4 Preparation for Examination of Doctoral Thesis” on page 248).

Normally students will complete course work before taking the comprehensive examinations, and will then go on to present and defend the PhD thesis proposal, all within two years.

For further information concerning requirements, consult the departmental graduate handbook.
Faculty of Business Administration

3302 Lohn Building, West Mall Complex, 778.782.3708 Tel, 778.782.4920 Fax, www.sfubusiness.ca/mba/
Dean (pro tem)
C.F. Smart BCom, MBA, PhD (Br Col)
Associate Deans
E.W. Bukszar, Jr. BA (John Carroll), MBA, PhD (Arizona)
M.R. Fizell BEd, BComm, MSc (Sask), CMA, FCMA
Faculty and Areas of Research
See "Faculty of Business Administration" on page 192 for a complete list of faculty.
N.A.R. Abramson – international business, comparative management
A. Bick – investments and asset pricing
G.W. Blazenko – business finance
M.J. Brydon – management information systems
G.R. Bush – organizational development, strategic human resource management
E.W. Bukszar, Jr. – business strategy, business, government and society
J.C.W. Chang – marketing
T.B. Lawrence – management and organization management
R. Krider – marketing
P.C. Klein – business finance
S.M. Kates – marketing
J. Li – international business studies
A. Lautsch – industrial relations, human resource management
R. Lautsch – industrial relations, human resource management
Y. Chen – accounting, performance measurement, international accounting
E.U. Choo – management science
D. Chung – accounting, capital markets
B.D. Cohen – technology and operations, entrepreneurship
C.M. Collins-Dodd – retailer decision-making, price expectations
D. Cyr – leadership, e-business, management and organization studies
C.P. Egri – organizational power and politics, innovation, leadership
C.E.N. Emby – accounting
M. Favere-Marchesi – accounting
D.R. Finley – accounting
M.R. Fizell – accounting
J.N.P. Francis – international and strategic marketing, negotiations, advertising
A.C. Gemini – management information systems
I.M. Gordon – accounting
R. Grauer – business finance
S. Gupta – operations management
J.K. Hall – science and technology policy research, strategy, technology and innovation management, international business and finance
D.R. Hannah – management and organization studies
G. Havers – ethics
J.W. Hearn – business finance
K. Hrazdil – accounting
R.D. Iervson – management and organization studies
J. Jermias – accounting
P. Julia – operations management
S.M. Kates – marketing
P.C. Klein – business finance
R. Krider – marketing
R. Krishnan – international business
B.A. Lauch – international relations, human resource management
T.B. Lawrence – management and organization studies
M.B. Lazarova – international business
J. Li – international business
E.A. Macdonald – accounting
E.M.A. Maine – management of technology, policy
I.P. McCarthy – management of technology, management science
G.A. Mauser – marketing
H. Merchant – international business
L.N. Meredith – business marketing, marketing strategy
M. Moore – strategy, managerial economics
M. Parent – management information systems
D.C. Parker – decision support systems
A.D. Pavlov – business finance
J. Pelozzy – marketing, new product development
L.Y. Pitt – marketing
G. Poltras – international finance, econometrics, financial institutions
B. Reich – management information systems
A. Rubin – accounting
K.E. Ruckman – policy
N. Saraf – management information systems
R.W. Schwindt* – industrial organization; international trade; business, government and society
D.M. Shapiro – international organizations, managerial economics, business and public policy
J. Sheppard – business policy, corporate failure and survival
C.F. Smart – business policy, organizational behavior
D.R. Smith – business finance
K.G. Stewart – business communication
D.C. Thomas – international business
P.M. Tingling – management information systems
R.L. Tung – international business
A. Vedraschko – finance and real estate
A.R. Vining – business policy, business government and society
O. Volkoff – management information systems
A.G. von Nordenflycht – policy and corporate governance
A.R. Warburton – management science
J.H. Waterhouse – accounting
M.N. Wexler – business, government and society, organizational behavior and theory
Y. Yang – marketing
R.A. Yates – commercial law
J.L. Zaichkowsky – marketing
C.D. Zatzick – management and organization studies
N. Zhao – management and organization studies, performance measurement
*joint appointment with economics

Graduate Diploma Offered
Graduate Diploma in Business Administration

Graduate Degree Offered
Master of Business Administration
Doctor of Philosophy

Graduate Programs
Four programs leading to the MBA degree are offered: Executive MBA, Global Asset and Wealth Management, Master of Business Administration, and Management of Technology MBA.
The Executive MBA program is a weekend program for mid-career managers or executives who want to continue working while studying in a collegial environment. The program takes a general management perspective; it focuses on organizational and decision-making processes that cut across functional divisions.
The Global Asset and Wealth Management program (GAWM), designed in co-operation with the financial community, provides expertise in the engineering and architectural aspects of investment management. Students obtain top-notch engineering skills through courses in economic theory and the science of asset allocation and security selection. They will also develop skills in the architectural side of investment management through courses in client relationship management, interpersonal communication, investment counselling and estate planning.
The Management of Technology program (MOT) is for those who already have at least two years of experience working in the technology sector and who are now considering a move into management. Students enrol in either the accelerated option (full-time study for 12 months) or the flexible option (part-time study for 20 months).
The MBA program provides broad-based and rigorous business training to prepare students for the global business world. Applicants should have non-business undergraduate degrees, and limited professional work experience, although work and life experiences will be considered for admission. The program is unique because it offers strong fundamentals to relatively inexperienced students over 12 months of intensive course work during three full-time semesters, followed by a four-month internship.
The PhD program develops outstanding students in research and teaching for future employment at leading international academic institutions by designing a unique program of study under the guidance of their supervisor and the academic chair.

Graduate Diploma in Business Administration
Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 1W6, 778.782.5013 Tel, 778.782.5122 Fax, www.sfubusiness.ca/gdba
Academic Chair
C.M. Collins-Dodd BCom, PhD (Alta), 778.782.5293
Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 778.782.5023

Admission Requirements
The basic entry qualification is a degree from a recognized university in an area other than business administration, commerce or equivalent. A university level course in mathematics is required and three reference letters, preferably from supervisors or former professors. Candidates must be computer literate and familiar with the Internet. The program requires a strong command of the English language. Applications are processed as they are received. Early submission of all required materials will enable admissions committee assessment expeditiously.

Application
Candidates must submit the following documentation.
• Simon Fraser University’s Application for Admission to the Graduate Diploma Program in Business Administration
• official copy of transcript of undergraduate grades (mailed directly from the granting institution)
• three confidential letters of reference (mailed directly from the referees)
• TOEFL and TWE test scores, if applicable.
Applicants must take the Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE) if their first language is not English
the following documentation by mail to the MBA program at the address above.
• official copies of undergraduate transcripts mailed directly from the granting institution
• three confidential letters of reference mailed directly from the referees
• graduate management admission test (GMAT) test results
• applicants whose primary language is not English, or whose previous education was conducted in another language, must submit evidence of satisfactory completion of a standardized English test that is acceptable to the University (see “1.3.12 English Language Competence” on page 244). The minimum acceptable test scores are: TOEFL 88 with a minimum score of 21 in each of the four components (listening, speaking, writing, reading); or TOEFL CBT (Test of English as a Foreign language computer based test) with a minimum score of 230 including a minimum essay score of 5.
• a recent passport style photo is required

Diploma Requirements
Students must complete 24 credit hours from the following courses.
BUS 550-2 Financial Accounting
BUS 551-2 Managerial Accounting
BUS 552-4 Managerial Economics
BUS 553-2 Quantitative Business Methods
BUS 554-2 Management Information Systems
BUS 555-4 Managerial Finance
BUS 556-4 Marketing Management
BUS 557-4 Human Resource Management
BUS 558-3 Special Topics* BUS 559-3 Special Topics* BUS 560 Directed Studies
*requires prior permission of the academic director

Courses Offered by the Program
The following BUS courses are offered for the graduate diploma: BUS 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560.

MBA Program
Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 1W6, 778.782.5131 Tel, 778.782.5153 Fax, mba@sfu.ca, www.sfu.ca/business/mba
Academic Chair
E. Bukszor BA (J Carroll), MBA, PhD (Arizona)
Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 778.782.5023

This program provides broad-based and rigorous business training to prepare students for the global business world. Applicants should have non-business undergraduate degrees, and limited professional work experience, although work and life experiences will be considered for admission.

The program is unique because it offers strong fundamentals to relatively inexperienced students over 12 months of intensive course work during three full-time terms, followed by a four-month internship.

Students who have completed the Graduate Diploma in Business Administration (GDBA) at a suitable standard qualify for advanced standing in the first term. The entire program consists of required courses with no elective courses. Instead, four courses (designated with an asterisk) deepen and enhance the core content. Course design will enable a significant course content individualization.

Admission
Program entry is competitive. Meeting the minimum admission requirements does not guarantee program acceptance. Applicants must have an undergraduate degree with a minimum 3.0 cumulative grade point average (CGPA) (B average). Alternatively, an undergraduate degree and the GDBA with a minimum 3.0 CGPA is required.

Students apply online at www.sfu.ca/dean-gradstudies/apply.htm and submit

Executive MBA Program
Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 1W6, 778.782.5131 Tel, 778.782.5122 Fax, emba_program@sfu.ca, www.sfu.ca/business/emb
Academic Chair
L.Y. Pitt BCom, MBA (Pretoria), MCom (Rhodes), PhD (Pretoria)
Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 778.782.5023

This program is for experienced, mid career managers and professionals seeking to improve their capacity to lead, to think strategically, and to manage change. This intensive, in-depth program builds a comprehensive understanding of theoretical and operational business models that create results. The program emphasizes global business leadership skills, strategic analysis, and change management.

The program utilizes a cohort model where students complete courses in the same sequence, and student interaction and co-operation are emphasized. Study groups and project teams are an important aspect of the learning experience.

Because Executive MBA students pursue full time careers, classes meet on alternate weekends, all day Friday and Saturday, and are held at Segal Graduate School of Business. The program begins in September with completion in 24 months.

Admission Requirements
Applicants will be considered for admission based on the following criteria.
• current business experience, with a minimum of four to five years of managerial responsibilities
• GMAT (graduate management admission test) results
• academic qualifications, including an undergraduate degree (B average) or a professional designation (i.e. CA, CMA, CGA, PEng)*
• three letters of reference
All students must demonstrate proficiency in mathematics, and Excel. A statistics workshop is offered in the summer prior to the term start.

*While priority will be given to those with a university degree or a professional designation, a limited number of applicants may be admitted who do not hold a formal degree but possess exceptional business management qualifications.

The application deadline is March 1 for September enrolment in the same year.

Degree Requirements
To qualify for the MBA degree, students must maintain a minimum average grade of B (3.0 GPA) and complete 12 core courses and a minimum of one elective from the following list.
BUS 601-2 Data and Decision-Making
BUS 602-4 The Global Business Environment
BUS 603-4 Structure and Change in Organizations
BUS 604-4 Organizational Change and Development
BUS 606-4 Financial Management
BUS 607-4 Business Strategy
BUS 610-2 Directed Studies in Business Administration
BUS 611-4 Directed Studies in Business Administration
BUS 612-4 Directed Studies in Business Administration
BUS 615-4 Marketing Management
BUS 621-4 Information Technology and Organizational Transformation
BUS 632-2 Operations Research
BUS 651-4 Managerial Economics
BUS 652-2 Special Topics in Business Administration
BUS 653-2 Special Topics in Business Administration

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BUS 654-2 Special Topics in Business Administration
BUS 655-2 Special Topics in Business Administration
BUS 660-4 Special Topics in Business Administration
BUS 661-4 Special Topics in Business Administration
BUS 662-4 Special Topics in Business Administration
BUS 663-4 Special Topics in Business Administration
BUS 670-4 Financial and Managerial Accounting
BUS 681-4 Organizational Leadership and Interpersonal Behavior
BUS 689-4 Industrial Relations
BUS 698-4 Applied Project

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Application
Students must submit the following documentation when applying for the GAWM MBA.

MBA (Global Asset and Wealth Management)
Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 1W6, 778.782.7921 Tel, 778.782.5153 Fax, www.sfubusiness.ca/gawm

Executive Director
C. Collins-Dodd BComm, PhD (Alta), 778.782.5293

Academic Chair
P. Klein BSc, MBA (WOn), PhD (Tor)

Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 778.782.5023

The Global Asset and Wealth Management Program (GAWM) was designed with the financial community resulting in a program that provides expertise in engineering and architectural aspects of investment management. Students obtain top-notch engineering skills through courses in economic theory and the science of asset allocation and security selection. They will also develop skills in the architectural side of investment management through courses in client relationship management, interpersonal communication, investment counselling and estate planning. Internships within the financial services community will be available to outstanding students who are enrolled in the full time GAWM program.

Admission Requirements
Applicants must have an undergraduate degree in business, commerce, economics, a professional designation such as a CFA, or successful completion of Simon Fraser University's Graduate Diploma in Business Administration (GDBA). In addition to the academic requirement, applications will be considered based on the following criteria:

- two or more years of work experience in the financial services industry
- a Graduate Management Admission Test (GMAT) score report
- three letters of reference from colleagues, supervisors or significant clients
- demonstrated proficiency in English will be required if an applicant has not graduated from an English speaking university or if an applicant's first language is not English
- in-person or telephone interview by the admissions committee.

Financial Assistance
A limited number of scholarships may be awarded annually from funds donated by the GAWM Business Council, subject to funding. See "Financial Aid for Graduate Students" on page 254 for information about scholarships and awards for graduate students.

Degree Requirements
To qualify for the MBA degree, students must maintain a minimum average grade of B (3.0 grade point average) and complete courses totalling 42 credit hours or more from the following list:

- BUS 802-3 Foundations of Financial Economics
- BUS 803-3 Financial Econometrics
- BUS 804-3 Strategic Analysis For Wealth Management
- BUS 805-3 Capital Markets
- BUS 806-2 Client Relationship And Leadership Effectiveness I
- BUS 807-2 Client Relationship And Leadership Effectiveness II
- BUS 808-2 Client Relationship and Leadership Effectiveness Practice
- BUS 809-3 Equity Security Analysis and Portfolio Management
- BUS 810-3 Fixed Income Security Analysis and Portfolio Management
- BUS 811-3 International Investing and Portfolio Management
- BUS 812-2 Tax and Estate Planning
- BUS 813-2 Ethics, Wealth Management and the Securities Industry
- BUS 814-3 Derivative Securities
- BUS 816-3 Investment Policy
- BUS 819-3 Final Project for GAWM Students

Courses Offered by the Program
The following BUS courses are offered for the Global Asset and Wealth Management program: BUS 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 816, 819.

MBA (Management of Technology)
Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 1W6, 778.782.5295 Tel, 778.782.5153 Fax, mbawolf@sfu.ca, www.sfubusiness.ca/mba/mot

Academic Director
C. Collins-Dodd BComm, PhD (Alta), 778.782.5293

Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 778.782.5023

This MOT program addresses high technology business sector needs, continuing the University's long tradition of industry collaboration. Graduates will have a solid grounding in management theories and disciplines, particularly focused on topics relevant to an organization with technical core competencies. MOT MBA students work in enterprises that have advanced technology products or services. Most will have an undergraduate degree in a technical discipline; some will have an undergraduate business degree with technical work experience.

The program consists of three full time terms including an industry-based final project. Students who continue working while completing the program may complete the program over five terms.

Admission Requirements
For admission, applicants to the MOT MBA must have a four year undergraduate degree with a minimum cumulative grade point average (CGPA) of 3.0 (B average). They must also meet the following criteria.

- a minimum of two years of relevant work experience in a technology firm or technology position
- graduate management admission test (GMAT) test results
- three letters of reference from colleagues, supervisors or significant clients

Application
Students must submit the following documentation when applying for the MOT MBA.

- Simon Fraser University's Application for Admission to the MOT MBA
- official copies of transcripts of undergraduate grades (mailed directly from the granting institution)
- three confidential letters of reference (mailed directly from the referees)
- GMAT (graduate management admission test) results
- TOEFL and IELTS test scores, if applicable.

English is the language of instruction and communication in the University. Accordingly, an applicant whose primary language is not English or whose previous education has been conducted in another language must demonstrate command of English sufficient to pursue graduate studies in the chosen field. Applicants normally will be required to achieve a satisfactory score on a standardized English test acceptable to the University. This test must include a writing component. The Test of English as a Foreign Language (TOEFL) including reading, writing, speaking, and listening components is acceptable for this purpose. The IELTS (International English Language Testing Systems) is also acceptable. The minimum University requirements for test scores is TOEFL 88 with a minimum of 20 in each category (internet based exam), or TOEFL 570 and TWE 5 (paper based), or TOEFL 230 (computer based), and IELTS overall band score of 7.0.

- a recent passport style photo
- a current curriculum vitae

Financial Assistance
See "Financial Aid and Awards" on page 41 for information on university scholarships and awards that are available to graduate students.

Degree Requirements
To qualify for the MBA degree, students must maintain a minimum average grade of B (3.0 grade point average) and complete courses totalling 54 credit hours (46 credit hours if accounting and managerial economics are waived) or more from the following list:

- BUS 750-4 Managing Technological Innovation
- BUS 761-4 Managerial Economics
- BUS 802-3 Foundations of Financial Economics
- BUS 803-3 Financial Econometrics
- BUS 804-3 Strategic Analysis For Wealth Management
- BUS 805-3 Capital Markets
- BUS 806-2 Client Relationship And Leadership Effectiveness I
- BUS 807-2 Client Relationship And Leadership Effectiveness II
- BUS 808-2 Client Relationship and Leadership Effectiveness Practice
- BUS 809-3 Equity Security Analysis and Portfolio Management
- BUS 810-3 Fixed Income Security Analysis and Portfolio Management
- BUS 811-3 International Investing and Portfolio Management
- BUS 812-2 Tax and Estate Planning
- BUS 813-2 Ethics, Wealth Management and the Securities Industry
- BUS 814-3 Derivative Securities
- BUS 816-3 Investment Policy
- BUS 819-3 Final Project for GAWM Students

- Simon Fraser University's Application for Admission to the GAWM MBA
- official copies of transcripts of undergraduate grades (mailed directly from the granting institution)
- three confidential letters of reference (mailed directly from the referees)
- GMAT (graduate management admission test) results
- TOEFL and IELTS test scores, if applicable.

Financial Assistance
A limited number of scholarships may be awarded annually from funds donated by the GAWM Business Council, subject to funding. See "Financial Aid for Graduate Students" on page 254 for information about scholarships and awards for graduate students.

- Simon Fraser University's Application for Admission to the MOT MBA
- Simon Fraser University's Application for Admission to the GAWM MBA
- official copies of transcripts of undergraduate grades (mailed directly from the granting institution)
- three confidential letters of reference (mailed directly from the referees)
- GMAT (graduate management admission test) results
- TOEFL and IELTS test scores, if applicable.

Financial Assistance
See "Financial Aid and Awards" on page 41 for information on university scholarships and awards that are available to graduate students.

- Simon Fraser University's Application for Admission to the MOT MBA
- Simon Fraser University's Application for Admission to the GAWM MBA
- official copies of transcripts of undergraduate grades (mailed directly from the granting institution)
- three confidential letters of reference (mailed directly from the referees)
- GMAT (graduate management admission test) results
- TOEFL and IELTS test scores, if applicable.

Financial Assistance
See "Financial Aid and Awards" on page 41 for information on university scholarships and awards that are available to graduate students.

- Simon Fraser University's Application for Admission to the MOT MBA
- Simon Fraser University's Application for Admission to the GAWM MBA
- official copies of transcripts of undergraduate grades (mailed directly from the granting institution)
- three confidential letters of reference (mailed directly from the referees)
- GMAT (graduate management admission test) results
- TOEFL and IELTS test scores, if applicable.
BUS 752-4 Strategic Management of Technology-based Firms
BUS 753-2 Ethics and Corporate Responsibility
BUS 754-4 Marketing Tech-Based Products and Services
BUS 755-2 Topics in International Business
BUS 756-4 Strategic Use of Information and Knowledge
BUS 758-4 Business Operations Design
BUS 761-2 Leadership for the Technology Driven Enterprise
BUS 762-4 Project Management
BUS 763-2 Managing Self and Others: An Organizational Simulation
BUS 764-4 Financing the Organization
BUS 766-4 Managerial and Financial Accounting†
BUS 770-2 Special Topics
BUS 771-2 Special Topics
BUS 772-2 Special Topics
BUS 773-2 Special Topics
BUS 774-4 Special Topics
BUS 776-4 Special Topics
BUS 778-4 Directed Studies in Management of Technology
BUS 780-6 Applied Project

*requires prior approval of the academic director
†corequisites may be waived for recent graduates in business or economics with prior approval of the academic director

Students wishing to complete the biotechnology management stream must successfully complete the following four courses. These are currently offered on-line through the University of California at San Diego, extension division, and may be taken by transfer credit.

• regulatory requirements
• regulatory compliance
• good laboratory practices
• good manufacturing practices

Students taking the biotechnology management stream are not required to complete two of the following courses.

BUS 756-4 Strategic Use of Information and Knowledge
BUS 762-4 Project Management
BUS 774-4 Special Topics in the Management of Technology

Courses Offered by the Program

The following BUS courses are offered for the Management of Technology program: BUS 750, 751, 752, 753, 754, 755, 756, 759, 761, 762, 763, 764, 765, 770, 771, 772, 773, 774, 775, 776, 780, 781.

PhD Program

Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 5X5, Tel: 778.782.6796 Tel, 778.782.5125 Fax, www.sfubusiness.ca/phd

Academic Director
E. Bukszar, Jr. BA (J Carroll), MBA, PhD (Arizona), 4935 Segal Graduate School of Business, 778.782.5195 Tel

In a small cohort, students benefit from sharing experience with others studying in various areas of business through a small number of common core courses. In addition, students study in their area of specialization and research methods that are tailored to the needs of individual students and the research strengths of the faculty. Also included is a teaching development component involving a certificate program. This is for graduate students without substantial teaching experience, or for experienced teachers who wish to upgrade their skills.

Admission Requirements

The minimum doctoral admission university requirements are provided in “1.3.4 Admission to a Doctoral Program” on page 244. Students are admitted in the fall term only. A minimum GMAT score of 600 and 5 on analytical writing is required. Interviews and a statement of interest is used to determine fit between students and faculty.

Application

Students must submit the following when applying.

• Simon Fraser University’s graduate application form
• official transcript of undergraduate and graduate grades (mailed directly from the granting institution).

It is advisable to include an unofficial copy of your transcript(s) with your application
• three confidential letters of reference using the Faculty of Business Administration PhD Reference Form, at least two of which are completed by faculty members at universities that comment on the student’s ability to conduct original research
• Faculty of Business Administration PhD Application Supplemental Information Form and Check List
• official score on the graduate management admissions test (GMAT). It is highly advisable to schedule testing well in advance of the application deadline. If available, please include an unofficial copy of the test result upon application.

English Language Competence

English is the language of instruction and communication at the University. An applicant whose primary language is not English or whose previous education was conducted in another language must demonstrate command of English that is sufficient to pursue graduate studies. Applicants normally will achieve a satisfactory score on a standardized English test that is acceptable to the University. This test must include a writing component. The Test of English as a Foreign Language (TOEFL) combined with the Test of Written English (TWE) are acceptable for this purpose. The International English Language Testing System (IELTS) is also acceptable. The minimum University requirements are as follows.

• IELTS with a minimum score of 7 on the academic modules; or
• TOEFL IBT (internet-based TOEFL test) with an overall score of 88 or better with a minimum score of 20 in each of the four components (listening, speaking, writing, reading); or
• TOEFL CBT (computer-based TOEFL test) with a minimum score of 230 including a minimum essay score of 5

Degree Requirements

The program combines a small number of cohort courses, a research methodology minor, and specialty courses selected by the senior supervisor and the doctoral candidate’s committee to create a curriculum which will be flexible within certain limits. Candidates typically complete three core courses, three courses in the research methods minor, and three to five courses in their specialized area as determined by their senior supervisor and doctoral committee. A research project with a pass/fail grade is required in the third term, and a candidacy exam. The candidate must fulfill the university qualifications regarding a thesis and its public defence.

Those who lack a business degree may, at the discretion of the PhD director, be asked to take qualifying courses (see qualifying courses). 

Core Courses

BUS 893-4 Theory Development in Business Administration

BUS 981-4 Research Methods in Business Administration*
BUS 982-4 Preparing a Thesis

*may be substituted by an appropriate course in other programs or universities as deemed by the PhD program director and the student’s supervisor

Core courses will be offered once a year.

Research Methods Minor

The research methods minor area requires three research methods courses approved by both the PhD program director and the student’s supervisor.

These courses are deemed pertinent to the student’s specific research. Other courses will be considered if they meet the needs of the PhD candidate. Examples of some possible courses are as follows.

ECON 835-4 Econometrics
ECON 836-4 Applied Econometrics
ECON 837-4 Econometric Theory I
ECON 838-4 Econometrics Theory II
EDUC 863-5 Quantitative Methods in Educational Research
EDUC 867-5 Qualitative Methods in Educational Research
PSYC 911-3 Research Design II: Research Studies
SA 857-5 Research Design Seminar
STAT 602-3 Generalized Linear and Nonlinear modelling
STAT 801-4 Statistics
STAT 802-4 Multivariate Analysis
STAT 805-4 Non-parametric and Discrete Data Analysis
STAT 806-4 Lifetime Data Analysis

These three required research methods courses will be taken in the first five terms. The student’s supervisor can add to, or substitute, minor courses in consultation with the director of the PhD program.

The Major: Specialization

These three to five courses are set and administered by the student’s supervisor and the PhD program director. These courses can include Faculty of Business Administration graduate courses, directed studies courses, special topics, as well as approved graduate courses in other programs or universities. It is highly recommended that at least one of the major courses be given by the student’s supervisor. In special cases, the student’s supervisor can recommend, in consultation with the PhD director, that the student take fewer, or more, courses than required in the major. At least two courses should be offered at Simon Fraser University.

Qualifying Courses

Students without prior business education or those who lack some specific background, or combination of education and experience, may be required to complete qualifying courses after PhD program admission. These requirements are at the discretion of the PhD director in consultation with potential senior supervisors. The number of qualifying courses may vary widely depending on the student’s specific background and their intended area of study.

Third Term Project (Summer Project)

PhD students will generate a research project in their third term that will be graded by the senior supervisor. A pass/fail assessment is intended to help the student to develop their research. The student can rewrite the project once. If the grade is still deficient, they will be asked to withdraw from the program.

Those who pass the research project will present it in the open research presentations (see above). Questions and answers emerging in this context should assist the student to develop an understanding of, and preparation for, the thesis defence.
PhD Comprehensive Exam
PhD students will be required to pass a comprehensive exam in the sixth term of the program. It will include written examinations in each student’s major and methodology minor, followed by an oral exam.

Candidacy Exam
In the seventh term, the candidate presents an oral thesis proposal defence. The PhD director assigns a faculty member who is external to the candidate’s committee, but within the faculty, to join in the examination. The exam will probe a written thesis proposal and may extend into the area in which the candidate intends to do their work. The senior supervisor, committee and external examiner will confer a pass/fail grade upon the candidate’s presentation and written work. Evaluator suggestions concerning improvement are expected. Those who fail the candidacy exam must retake it and pass by the end of the eighth term or they will be asked to withdraw from the program. No candidate, unless given special permission, is permitted to take a candidacy exam after the eighth term.

Thesis/Thesis Defence
Following “1.9 Preparation for Examinations” on page 247 of the Graduate General Regulations, the PhD thesis will focus on original research in one long narrative/empirical work or a series of papers.

Residence Requirement
The candidate must be enrolled and in residence at the University for a minimum of five terms. See “1.7.3 Residence Requirement for the Doctoral Degree” on page 247.

Teaching Option
PhD students without substantial teaching experience may complete the Certificate Program for Graduate Students in University Teaching and Learning — instructional development, teaching enhancement and a practicum — offered by the Learning and Instructional Development Centre. The program enhances and develops teaching skills. The practicum involves developing and delivering an undergraduate course in the Faculty of Business Administration.

Courses Offered by the Program
The following BUS courses are offered for the PhD program: BUS 975, 976, 977, 978, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992
Faculty of Education

8655 Multi Purpose Complex, 778.782.4787 Tel, 778.782.4320 Fax, www.educ.sfu.ca/gradprogs

Dean
P. Shaker BA, MA, PhD (Ohio State)

Associate Dean
P.P. Grimmett BA (Newcastle, UK), BEd (Keelee), MA, MEd (Alta), EdD (Br Col)

Faculty and areas of research
See “Faculty of Education” on page 199 for a complete list of faculty.

C.L. Amundsen – educational technology; technology use in higher education; pedagogical growth and development in higher education; faculty development; student learning in higher education
H. Bai – philosophy of education; humanities; social, moral philosophy; epistemology; ecology; cross-cultural education; Asian philosophies; Zen arts
R. Barrow – philosophy of education; moral philosophy; curriculum; teacher education; place of philosophy in empirical educational research and teacher education
C.W. Bingham – philosophy of education; literary theory; curriculum; the psyche; teaching as a life practice; inter-human recognition; literary representations of education, hermeneutics, deconstruction, queer theory
S.Blenkinsop – philosophy of education; imagination in teaching and learning; ecology; relational epistemologies; theories of place; existentialism; continental philosophy
S.R. Campbell – co-emergence and co-dependence of mathematical and philosophical thinking in the history of Western culture, and how those developments can inform mathematics education
W. Cassidy – law-related education; citizenship education; social studies education; the ethic of care; social justice; “at risk” youth; creating a culture of care in schools; cyberbullying
D.H. Dagenas – bilingualism; socio-linguistics; literacy; ethnography; educational change; language learning in minority and majority contexts; literacy practices at home and at school
S.C. de Castell – Educational media studies, non-formal learning environments; multi-modal, study of emerging methods of models of educational communications, education, gaming and gender
C. Dehler – on-line and distance teaching and learning environments; educational technology integration; diffusion of innovation; computer-mediated communication
K. Egän – Canada Research Chair; educational theory; intellectual development; the nature and development of imagination and its role in education
M. Fettes – Epistemological, sociopolitical and pragmatic aspects of educational reform; theoretical aspects of modernity and post-modernity; the history and sociology of linguistic and educational thought
I. Geva-May – policy studies, policy analysis, policy evaluation, comparative policies, political cultures impact on policy-making, disciplinary focus in recent years on policy of higher education, immigration, health care
P.P. Grimmett – teacher education and teacher development; curriculum theory and implementation; educational leadership and teacher research; reflective practice; cultures of teaching
A.O. Horvath – counselling families; therapeutic relationships; cognitive-attributional processes
M.J. Hosky – language, memory and learning across the lifespan; individual and age-related differences in language and literacy acquisition
M.J. Jacquet – ethnic diversity; bilingual education; bilingualism/multiculturalism; first and second French language learners
L. Kanevsky – education of gifted children, educational psychology
D. Kaufman – teaching and learning with technology; instructional methods in higher education, research and evaluation methods
P.A. Keats – witnessing and vicariously witnessing trauma; secondary traumatization; acute and post-traumatic stress; trauma treatments for civilian and military clients; visual cognition
V. Kelly – aesthetic ways of knowing; arts and literacy; special education and art therapy; imagination in education; holistic education; spirituality in education
J. LaB – teacher education; role of agenda setting in policy development; funding models in post secondary education; strategic planning; international program development and curricular integration
L. LaRocque – community, collaboration, ethic of caring, leadership, district-school relations, implementation of change, school reform, educational policy, teacher education
L.J. LeMare – children’s socio-emotional development in family and school contexts; early childhood education; impact of early adversity
D. Laitsch – the use and misuse of research in policymaking and issue advocacy; policy issues related to market-based education reform efforts; the impact of high stakes accountability and assessment programs on educational systems
P. Liljedahl – instances of creativity, insight, and discovery in mathematics; mathematics and aesthetic; teaching and learning of elementary number theory; imagination and mathematics; instructional design
M. MacDonald – early childhood education; language and literacy development; intergenerational and family literacy; pedagogical documentation; negotiated curriculum; early childhood environments
A.M. MacKinnon – science education; teacher education; philosophy of science; children’s conceptual development in science; the nature and role of practical experiences in teacher development
G. Mador-Jones – language arts; hermeneutics; philosophy of education; poetry; history of literacy; BC literature
C.M. Mamchur – language arts education; enhancing teacher self-concept and developing curriculum to do that; teaching and learning style models; systematic observation; Jungian psychological type and perceptual psychology measures (pre and in-service) and research
S. Marshall – academic literacy; sociolinguistics; multilingualism; language learning
J. Martin – theory and history of education; educational psychology; applied social, developmental psychology in education; selfhood, personhood, and education
D. Moore – applied linguistics, sociolinguistics, bilingualism and plurilingualism; pluriliteracy; immigration; language acquisition and second language learning; code-switching
J. Nesbit – educational psychology; educational technology; self-regulated learning with multimedia; cognitive tools; learning resource evaluation; adaptive learning systems; research methods
P. Neufeld – general inter-literacy development and instruction; learning disabilities; and English-as-a-second-language reading; the social construction of disability and risk
M. Nilson – public policy in higher education; policy analysis; post secondary participation research
D.K. O’Neill – educational technology; inquiry learning in K-12 history and science; computer-supported collaborative learning (CSCL) in K-12; tele-mentoring (on-line mentoring), relationships to support inquiry-oriented teaching
D. Paterson – school counselling; developmental counselling; counselling in the elementary school; school-based support teams; counselling in groups
N. Popadiuk – qualitative research examining international student adjustment and intimate relationships; school counselling, suicide counselling, the self-confrontation interview in clinical settings
S. Richmond – arts education; aesthetics and arts theory; philosophical and social foundations of education; globalization; arts-based research
C. Sabatier – French education, multilingualism pedagogy; socio-linguistic research on school and immigration
E. Sarier – philosophy of administration and leadership, research comparative educational administration; Weberian studies; organizational culture and aesthetics; epistemological foundations of administration and leadership
M. Schmidt – K-12 research on the areas of educational reform; classroom assessment; ethnography; education of minorities; intersection of parenting and schools; educational leadership
O. Sensyo – schools and societal curricula; contemporary scholarship in education including tracking of historical, relational and cyclical issues in society and educational practice
Y. Senyshyn – philosophy of education and language; philosophical analysis applied to creative live musical performances
N. Sinclair – mathematics education; primary and middle school technology in mathematics, learning and research; mathematical ways of knowing
S.J. Smith – human sciences; issues related to physical education; outdoor education and health education; physical education, phenomenological inquiry, pedagogical theory, and children’s play interactions
C. Snowber – movement education; arts-based research; physical education; arts in education; phenomenological curriculum research; embodiment and pedagogy; writing and the body
L. Sterling – program evaluation in aboriginal health and labor markets; First Nations curriculum; impact of residential educational reform; classroom development for aboriginal social work programs
J.H. Sugarman – theory and philosophy of social science research; sociocultural perspectives on psychological development; the psychology of moral agency; the psychology of selfhood and personhood
J. Thompson – counselling; close relationships; career development; couples theory; career counselling and career decision making; women’s career development
K. Tooke – English as a second foreign language; multi-cultural education; native Indian education; bilingual education; bilingual education for minority language students
D. van der Wey – cross-cultural dialogue; first nations education; cohorts and coalition work; social justices; anti-racism education; curriculum studies
S. Vamos – health education; teacher preparation in health education; curriculum development in health education; co-ordinated school health programs; adolescent health behaviours and attitudes
P.H. Winne – Canada Research Chair; educational psychology; self-regulated learning; learning tactics
Graduate Programs

8655 Education Building, 778.782.4787 Tel, 778.782.4320 Fax, www.educ.sfu.ca/gradprogs

Graduate Program Director
T.J. O’Shea BEng (McG), BEd (Sask), MEd (Manit), EdD (Br Col)

Graduate Degrees Offered
Master of Arts
Master of Education
Master of Science
Doctor of Education
Doctor of Philosophy

The Faculty of Education offers graduate programs leading to MEd, MA, MSc, EdD and PhD degrees in select fields of scholarly and professional studies. The nature of and requirements for degrees vary by degree and by field of study.

The MEd is a professional degree signifying advanced knowledge about and advanced training in educational practice. Minimal requirements for MEd course work/comprehensive exam programs is the completion of 35 credit hours in required and elective courses, plus a final comprehensive examination (five credit hours). The content of EDUC 883 MEd Comprehensive Examination varies by program.

In one program, the MEd culminates in a project that materially and substantially relates theory to practice or that systematically examines a significant problem in education. Students enrolled in the MEd program that includes a project must successfully complete a minimum of 33 credit hours divided between courses (at least 28 credit hours) and EDUC 881 Project (five credit hours).

The MA, MSc, EdD and PhD are degrees signifying advanced knowledge in a field of specialization and advanced competence in conducting significant and original research in education. Minimal requirements for the MA and MSc degrees are successful completion of 33 credit hours of graduate work divided between required and elective courses (at least 23 credit hours) and EDUC 898 Master’s Thesis (10 credit hours).

Minimal requirements for the PhD are successful completion of 35 graduate credit hours beyond requirements for a MA or MSc, consisting of 20 credit hours divided among required and elective courses, comprehensive examination (five credit hours) and EDUC 899 Doctoral Thesis (10 credit hours).

The EdD in Educational Leadership is a professional degree signifying the acquisition of advanced knowledge and expertise in educational leadership. Minimal requirements for the EdD degree are successful completion of 40 credit hours of graduate work, consisting of 25 credit hours divided among required and elective courses, a comprehensive examination (five credit hours), and EDUC 899 Doctoral Thesis (10 credit hours).

Admission Requirements

See “1.3 Admission” on page 243 of the Graduate General Regulations for University admission requirements. In exceptional circumstances, applicants who do not meet these requirements may be considered if superior scholarly or professional achievement is demonstrated.

All applications are reviewed once each year. All parts of an application to the master's program in counselling psychology must be complete and received by January 31. All parts of an application to all other master’s programs must be complete and received by February 15. All parts of an application to PhD programs must be complete and received by January 15. Applicants to an individual master’s program (see below) are urged to begin the application process well in advance of this deadline. An interview may be required. Admission is granted to a specific degree program or specialization. Admission decisions are available by April 15. Application information will be available after November 15 by telephone, fax, e-mail and web.

Please contact MEd Off Campus and EdD programs directly for deadlines.

MA, MEd, MSc and Program Information 778.782.3984 Tel, 778.782.4320 Fax, educpgdp@sfu.ca

PhD Program Information 778.782.4787 Tel, 778.782.4320 Fax, educphd@sfu.ca

MEd Off Campus Program Information 778.782.5951 Tel, 778.782.8119 Fax, cpmed@sfu.ca

EdD Program Information 778.782.8099 Tel, 778.782.8119 Fax, edcedd@sfu.ca

Supervision

A pro-tem advisor, who is appointed by the director of graduate programs upon admission, offers counsel regarding elective courses and other matters and, in those programs requiring a project or thesis, about selecting a committee to supervise this work. For additional information about supervisory committees, refer to “1.6 Supervision” on page 246 of the Graduate General Regulations.

Master’s Programs

The MA and MSc degrees signify the acquisition of advanced knowledge in the student's field of specialization and competence in conducting significant and original research in education. Graduate programs leading to these degrees culminate with a master's thesis (EDUC 898).

The MEd is a professional degree signifying advanced knowledge and training in educational practice. All MEd programs, except an individual program, culminate with a comprehensive exam (EDUC 883). In an individual program, a project (EDUC 881) is undertaken that materially and substantially relates theory to practice or that examines a significant education problem.

MEd Off Campus Programs – Two Year Option

MEd programs are for practicing educators who wish to improve abilities to critically read, evaluate and integrate educational theory and research.

Two year MEd programs in educational leadership and in curriculum and instruction, offered in communities through the province, focus on a theme that integrates scholarly inquiry with focal interests and professional practice needs. During fall and spring terms, classes are normally scheduled for a five-week second weekend in the community where the program is situated. In the summer terms, students typically attend classes on the Simon Fraser University main campus in July.

School districts, educational institutions, groups and individuals interested in an MEd off campus program should contact the off campus graduate programs office. Telephone: 778.782.5951.

MEd Field Programs – Three Year Option

A three year option of the MEd focuses on educational practice and builds on the course work of the Graduate Diploma in Advanced Educational Studies. This option admits students who are enrolled in the two year graduate diploma and provides for a third year of study leading to the MEd in educational practice. Interested individuals should contact the Field Programs office, 778.782.4892/5830 Tel.

Residence Requirements

See “1.7 Residence and Course Requirements” on page 246.

Research Competence Requirement

Master’s students must demonstrate research competence that is appropriate to their program or program specialization to the supervisory committee’s satisfaction. See “1.7.2 Residence Requirement for the Master’s Degree” on page 246.

MEd Comprehensive Examinations

All MEd candidates, except those in an individual program, must take a comprehensive examination by enrolling in EDUC 883. Normally, this occurs in the term in which course requirements are completed or in the immediately following term. Students are advised to observe deadlines for adding courses in planning the term in which they enrol in EDUC 883.

MEd Project

This option is available to students in an individual.

MA and MSc Thesis

Normally, before the fifth program course, the student presents a master's thesis research plan to the tenured or tenure track member of the Faculty of Education whom the student proposes to be senior supervisor. The senior supervisor and at least one other faculty member chosen in consultation with the senior supervisor constitutes the supervisory committee and the student proceeds to the thesis. The master's thesis is examined as prescribed in the Graduate General Regulations ("1.9 Preparation for Examinations" on page 247 and "1.10 Examinations" on page 248).

Master’s Programs

Arts Education

This program leads to a master of education course work/comprehensive exam (MEd) or MA degree. The MEd requires 35 credit hours of course work plus a comprehensive exam while the MA requires 25 credit hours plus a thesis.

MEd students are required to complete all of the following.

Core Courses

EDUC 843 S Embodiment and Curriculum Inquiry
EDUC 848 S Ideas and Issues in Aesthetic Education
EDUC 849 S Artists, Society and Arts Education
EDUC 850 S Creativity and Education
EDUC 852 S Education and Dramatic Art
EDUC 868 S Curriculum Theory and Art Education
EDUC 869 S Music Education as Thinking in Sound

All students enter the program through the MEd and may move to the MA after completing four courses with faculty approval. MA students must complete a minimum of five courses from the list, as scheduled. Other courses may be required depending on thesis interest.
Comprehensive Examination/Thesis
A final comprehensive exam is required for MEd students. A thesis is required for MA students.

Counselling Psychology
This program leads to an MA or MEd degree. The MA program is for students interested in careers as counsellors in schools, colleges, and community agencies. Students pursue a general program with specialization opportunities provided in course and field work. Counselling MA program students must complete a minimum of 40 hours of course work and a thesis including the following.

MA Core Courses
EDUC 799-3 Supervised Counselling Clinic I
EDUC 800-3 Supervised Counselling Clinic II
EDUC 801-3 Counselling Practicum I
EDUC 802-3 Counselling Practicum II
EDUC 862-4 Individual Assessment Procedures
EDUC 870-4 Theories of Counselling Psychology
EDUC 872-3 Ethics in Counselling Psychology
EDUC 874-5 Counselling Skills and Strategies
EDUC 878-5 Group Counselling
EDUC 898-10 Masters Thesis

MA students must also complete one methodology research course selected from the list below in consultation with the senior supervisor.

EDUC 863-5 Quantitative Methods in Educational Research
EDUC 864-5 Research Designs in Education
EDUC 866-5 Advanced Qualitative Research in Education
EDUC 867-5 Qualitative Methods in Educational Research
EDUC 975-5 Advanced Qualitative Methods in Educational Research

In addition, MA students must complete one elective course selected from the MA/MEd electives list in consultation with the senior supervisor. The MA program is for students who wish to become counsellors in educational settings. The program consists of a minimum of 45 credit hours and a comprehensive exam. All MEd students must complete the core requirements listed below.

MEd Core Courses
EDUC 799-3 Supervised Counselling Clinic I
EDUC 800-3 Supervised Counselling Clinic II
EDUC 801-3 Counselling Practicum I
EDUC 802-3 Counselling Practicum II
EDUC 862-4 Individual Assessment Procedures
EDUC 864-5 Research Designs in Education
EDUC 870-4 Theories of Counselling Psychology
EDUC 872-3 Ethics in Counselling Psychology
EDUC 874-5 Counselling Skills and Strategies
EDUC 877-4 Contemporary School Counselling
EDUC 878-5 Group Counselling
EDUC 885-5 MEd Comprehensive Examination

In addition, MEd students must complete one elective course selected from the MA/MEd electives list in consultation with the senior supervisor. Electives may be selected from the MA/MEd electives list.

MEd Comprehensive Examination (EDUC 883)
Students take a comprehensive examination after completing course work and supervised field experiences. The exam is set by faculty members associated with the program, in association with the director, and covers ethics and professional practice.

MA/MEd Electives
EDUC 803-5 Educational Program Supervision
EDUC 805-5 Social Development in the School Context
EDUC 819-5 Studies in Teacher-Student Interaction
EDUC 822-5 Evaluation of Educational Practice
EDUC 829-5 Contemporary Issues in Learning Disabilities
EDUC 833-5 Social and Moral Philosophy and Education
EDUC 860-3 Foundations of Educational Psychology
EDUC 863-5 Quantitative Methods in Educational Research
EDUC 866-5 Advanced Qualitative Research in Education
EDUC 867-5 Qualitative Methods in Educational Research
EDUC 871-4 Family Counselling
EDUC 873-4 Vocational Counselling
EDUC 876-5 Cognitive Intervention Research
EDUC 878-5 Group Counselling
EDUC 970-5 Systems and Paradigms in the Psychology of Education
EDUC 975-5 Advanced Qualitative Methods in Educational Research

Curriculum and Instruction
This program leads to the MA, which requires at least 25 credit hours of course work and a thesis (EDUC 898); or the MEd degree, which requires at least 35 credit hours of course work and a comprehensive examination (EDUC 885). The program is for educators who wish to examine critically current educational theory, research and practice. Participants are encouraged to examine their own instructional practices and to consider the match between practices and developing education theories. The program can focus on an area of specialization such as second language learning inclusion, foundations, health and French education, or can be pursued as a general program. Current information about the specializations is available from the Graduate Programs office or at www.educ.sfu.ca/gradprogs. Each specialization adds course requirements to the general program requirements.

Students must complete three of the following.

Core Courses
EDUC 816-5 Developing Educational Programs and Practices for Diverse Educational Settings
EDUC 820-5 Current Issues in Curriculum and Pedagogy
EDUC 822-5 Evaluation of Educational Programs
EDUC 823-5 Curriculum and Instruction in an Individual Teaching Speciality
EDUC 830-5 Implementation of Educational Programs
EDUC 833-5 Seminar in Social and Moral Philosophy and Education
EDUC 851-5 Perspectives on Technology-Supported Learning
EDUC 864-5 Research Designs in Education

Comprehensive Examination/Thesis
A final comprehensive exam is required for MEd students. A thesis is required for MA students.

Educational Leadership
This program leads to the MA or MEd degree and is intended for current or prospective leaders who are engaged in educational activities in a variety of societal workplaces (e.g., schools, colleges, community agencies, health agencies, justice agencies, arts agencies). The MA consists of five required courses (25 credit hours) plus a thesis; the MEd consists of seven courses (35 credit hours) plus a comprehensive exam. While the program is grounded both in research and in practice, it has a strong philosophical and conceptual orientation. All these features encourage students to view issues and problems in the workplace in more complex and educative ways. MEd and MA students are required to complete all the following.

Core Courses
EDUC 813-5 Organizational Theory and Analyses
EDUC 815-5 Administrative Processes
EDUC 817-5 Policy Processes
EDUC 819-5 Leadership Studies

MEd Requirements
Students will normally be admitted to the MEd course work/comprehensive exam program. In addition to the four core courses, students will complete EDUC 811-5 Fieldwork I plus two additional courses (10 credit hours) approved by the co-ordinator.

EDUC 883-5 MEd Comprehensive Examination follows completion of course work requirements. It is held once a year, during summer session.

MA Requirements
Students admitted to the MEd program may, on the senior supervisor’s recommendation, transfer into the MA program. The MA requires the four core courses above plus EDUC 864. Students must demonstrate appropriate research competence which may necessitate taking one or both of the following.

EDUC 863-5 Quantitative Methods in Educational Research
EDUC 867-5 Qualitative Methods in Educational Research

Students may also take one or more electives as required or approved by the senior supervisor.

EDUC 898-10 Master’s Thesis follows completion of course work requirements.

Educational Practice
This three-year program, leading to the MEd (course work/comprehensive exam), focuses on educational practice and builds on the Graduate Diploma in Advanced Educational Studies. It is available only to students who are enrolled in the graduate diploma offered by Field Programs. Students in the second year of the two year diploma program may apply to this MEd program and will undertake a third year following completion of the graduate diploma course work. It requires 30 credit hours of 500 division EDPR course work, plus 15 credit hours of core graduate course work, and a comprehensive exam.

Core Courses
EDUC 807-5 The Foundations of Action Research
EDUC 811-5 Fieldwork I
EDUC 867-5 Qualitative Methods in Educational Research
EDUC 883-5 MEd Comprehensive Examination

Contact Field Programs: 778.782.4892 Tel, 778.782.5982 Fax, fpa@sfu.ca

Educational Psychology
This program leads to the MA or MEd degree (comprehensive examination). Through studies of theories and allied empirical research in educational psychology, and research methodologies, the program provides for a general survey of educational psychology or specialization in development, exceptionality, or reading. Students may apply for transfer credit if graduate course work completed at another institution duplicates courses in this program.

MA and MEd students are required to complete all core courses.

Core Courses
EDUC 840-0 Graduate Seminar
EDUC 860-3 Foundations of Educational Psychology
EDUC 864-5 Research Designs in Education

General Stream Required Courses
EDUC 827-5 Individual Differences in Learning
EDUC 842-5 Sociocultural Perspectives on the Psychology of Development and Education
Students pursuing an MA degree must complete EDUC 894-4 Methods for Research and Inquiry in Education, EDUC 864-5 Research Designs in Education, and EDUC 890-4 Educational Media as Foundations of Core Courses. Students are required to complete all of the following.

Core Courses
EDUC 826-5 The Reading Process
EDUC 828-5 Instructional Practices in Reading

Electives
Elective courses must be approved by the pro-tem advisor or senior supervisor prior to enrollment.

MA Degree Requirements
Students must complete all of the following.
• core courses (eight credit hours)
• courses in a stream (10 credit hours)
• two electives chosen from courses within the educational psychology program (10 credit hours)
• one of EDUC 863-5 Quantitative Methods in Educational Research or EDUC 867-5 Qualitative Methods in Educational Research
• EDUC 898-10 Master’s Thesis

MEd Degree (Comprehensive Examination) Requirements
Students must complete all of the following.
• core courses (eight credit hours)
• courses from any three streams (30 credit hours)
• at least one elective course within the educational psychology program (five credit hours), and
• EDUC 883-5 MEd Comprehensive Examination

Educational Technology and Learning Design
This program leads to either the MA (thesis) or MEd (comprehensive examination) degree. It develops professionals who take a scholarly approach to learning technologies design, plans for its use, and/or evaluations of technology-based learning innovations. Designed to accommodate either students who are employed full time during the day or who take work leave to study full-time, the program supports diverse cohorts including K-12 teachers, college instructors, instructional designers, and aspiring academicians. Applicants are welcome from a wide variety of educational and technical backgrounds. Depending upon the course work on their transcripts, students may be admitted conditionally upon completing Faculty of Education prerequisite courses. Students are required to complete all of the following.

Core Courses
EDUC 890-4 Educational Media as Foundations of Curriculum
EDUC 891-4 Learning Design in Technology-mediated Environments
EDUC 892-4 Cognitive Tools and Multimedia Learning
EDUC 893-4 Organizational and Social Aspects of Learning Technology Design
EDUC 884-5 Research Designs in Education
EDUC 894-4 Methods for Research and Inquiry in Learning Technologies

MA Requirements
Students pursuing an MA degree must complete
• five credit hours of elective course work, plus
• EDUC 898-10 Master’s Thesis

MEd Requirements
Students pursuing a Master of Education complete
• 10 credit hours of elective course work, plus
• EDUC 883-5 MEd Comprehensive Examination

Individual Program
In exceptional cases, when no other regularly offered master’s program can accommodate special interests, an applicant may propose a unique curriculum called an individual program. The curriculum must include a minimum of 30 credit hours of course work plus EDUC 881-5 Project for a MEd Degree, or 25 credit hours of course work plus EDUC 898-10 Master’s Thesis for a MA Degree.

Individual program applicants must submit a proposal detailing the following.
• the inquiry to be pursued for the master’s project or thesis
• courses proposed and their sequence (called the plan of study and research)
• a rationale for how the proposed courses contribute to the master’s project or thesis
• the program must contain a combination of up to 10 credit hours of course work in Directed Readings and/or EDUC 811 or 812 Fieldwork.
• an explanation of how the applicant’s interests are not met by a regularly offered master’s program.

The plan must be developed with, and approved by, a faculty sponsor who automatically becomes the senior supervisor of the master’s project or thesis. A second person suitably qualified in relation to the project or thesis joins the supervisory committee formally before the completion of the fourth course in an individual program.

In addition to other criteria considered for admission, the director of graduate programs or designate will adjudicate the plan of study and research regarding availability of resources to support it and whether it can be completed in reasonable time.

Secondary Mathematics Education
This cohort program, leading to the MSc (thesis) or MEd (course work/comprehensive) in the teaching of secondary school mathematics, is offered jointly by the Faculty of Education and the Department of Mathematics. For the MSc (thesis) degree, as well as writing a thesis which will be supervised by a member of the Faculty of Education or the Department of Mathematics, students complete 25 credit hours (see below). Students pursuing the MEd (course work) option will, in addition to 25 credit hours, take a minimum of 10 credit hours of graduate electives in education and/or mathematics, and a comprehensive examination. Students will select a degree option in consultation with faculty members.

Students are required to complete all of the following.

Core Courses
EDUC 844-5 The Research Basis of Mathematics Education
EDUC 846-5 Foundations of Mathematics Education
EDUC 847-5 Teaching and Learning Mathematics
MATH 603-4 Foundations of Mathematics
MATH 604-4 Geometry
MATH 605-4 Mathematical Modelling

Electives
The remaining courses are selected from graduate courses in the Faculty of Education or in the Department of Mathematics.

Comprehensive Examination/Thesis
A final comprehensive exam is required for MEd students. A thesis is required for MSc students.

Teaching English as a Second or Foreign Language
This program, leading to the course work/comprehensive MEd degree, is for teachers working with English as a second or foreign language to adults, whose interests are primarily pedagogical. The program consists of 35 credit hours of course work followed by the MEd comprehensive examination. Students are required to complete all of the following.

Core Courses
EDUC 714-5 Special Topics: Equity in Language and Literacy Education
EDUC 824-5 Seminar in Second Language Teaching
EDUC 825-5 Second Language Acquisition and Schooling
EDUC 856-5 Sociocultural Perspectives on Education and Identity

Electives
Students will select three of the following courses.
EDUC 711-5 Special Topics: Anti-Racist Pedagogies
EDUC 720-5 Special Topics: Vygotskian Methodology for Language Instruction
EDUC 820-5 Current Issues in Curriculum and Pedagogy
EDUC 826-5 The Reading Process
EDUC 827-5 Individual Differences in Learning
EDUC 854-5 Teachers as Agents of Change
EDUC 855-5 Multicultural and Race Relations Education: Policy Development and Program Implementation

Comprehensive Examination
A comprehensive exam is required for MEd students.

Doctoral Programs
Doctoral degrees signify the acquisition of advanced knowledge in a field of specialization and advanced competence in conducting significant and original education research. The EdD program emphasizes leadership in education. The PhD programs accentuate theoretical and professional studies plus advanced scholarly inquiry in education. Both degrees culminate in a comprehensive examination (EDUC 983) and a doctoral thesis (EDUC 899). Requirements for doctoral degrees vary by program.

Residence Requirements
See “1.7 Residence and Course Requirements” on page 246.

Comprehensive Examination
All doctoral candidates must take a comprehensive examination by enrolling in EDUC 983. This is a prerequisite to EDUC 899 Doctoral Thesis. Normally, the comprehensive exam is taken in the term in which course requirements are completed or the term immediately following.

EdD and PhD Thesis
Normally, before the fourth course, a thesis research plan is presented to the tenured or tenure track Faculty of Education member whom the student proposes to be senior supervisor. Following the supervisor’s approval and at least one other University faculty member chosen in consultation with the senior supervisor, the supervisory committee is formed and the student proceeds to the thesis. The completed thesis is examined as in Graduate General Regulations “1.9 Preparation for Examinations” on page 247 and “1.10 Examinations” on page 248.

For EdD students, the member(s) in addition to the senior supervisor may be member(s) of the University faculty or other suitably qualified persons.
Programs of Study

Arts Education
This program, leading to a PhD, is for those interested in becoming scholars and leaders in art education. Students are required to complete all of the following.

EDUC 502-5 Interdisciplinary Seminar in Contemporary Educational Thought
EDUC 921-5 Seminar in Philosophy and Educational Theory
EDUC 922-5 Advanced Seminar in Epistemology and Education
EDUC 983-5 Doctoral Comprehensive Examination

EDUC 899-10 Doctoral Thesis

Curriculum Theory and Implementation
This program, leading to a PhD, requires successful completion of 20 credit hours of course work beyond the requirements for the MA, MSc or MEd.

EDUC 901-5 Seminar in the History of Educational Theory
EDUC 902-5 Interdisciplinary Seminar in Contemporary Educational Thought
EDUC 911-5 Colloquium in Curriculum Theory I
EDUC 912-5 Colloquium in Curriculum Theory II
EDUC 983-5 Doctoral Comprehensive Examination
EDUC 899-10 Doctoral Thesis

The supervisory committee may require further work in the Faculty of Education or other faculties. Students are encouraged to complete additional courses from related departments outside the Faculty of Education.

Philosophy of Education
This program focuses on three interconnecting themes of ecology, culture and consciousness, and brings relevant philosophical traditions, theories, innovations, and methods to work with these themes. Students are required to complete all of the following.

EDUC 901-5 Seminar in the History of Educational Theory
EDUC 902-5 Interdisciplinary Seminar in Contemporary Educational Thought
EDUC 921-5 Seminar in Philosophy and Educational Theory
EDUC 922-5 Advanced Seminar in Epistemology and Education
EDUC 983-5 Doctoral Comprehensive Examination
EDUC 899-10 Doctoral Thesis

Educational Leadership
This program, leading to an EdD degree, is for educational administrators who work full time, and so classes are held on extended weekends and during the summer. This degree looks beyond educational classes are held on extended weekends and during the summer. This degree looks beyond educational

EDUC 950-5 Approaches to Educational Research
EDUC 960-5 Ethics, Law and Professional Leadership
EDUC 961-5 Educational Governance, Reform and Diversity
EDUC 962-5 Organizational Leadership, Accountability, and the Public Interest
EDUC 964-5 Seminar in Educational Theory

EDUC 983-5 Doctoral Comprehensive Examination
EDUC 899-10 Doctoral Thesis

Mathematics Education
This program, leading to a PhD degree, is for those interested in becoming scholars and leaders in mathematics education. Prior knowledge of mathematics and issues related to teaching and learning mathematics is required.

Students are required to complete all of

EDUC 899-10 Doctoral Thesis
EDUC 910-5 Directed Readings
EDUC 941-5 Mathematical Learning and Thinking: Historical, Philosophical and Psychological Dimensions
EDUC 942-5 Contemporary Theories and Methodologies in Mathematics Education
EDUC 946-5 Doctoral Seminar in Mathematics Education
EDUC 983-5 Doctoral Comprehensive Examination

Field Programs
8559 Education Building, 778.782.4922/5830 Tel, 778.782.5882 Fax, www.educ.sfu.ca/fp, edprg@sfu.ca

Director
A.M. MacKinnon, BSc, BED, MSc (Calg), EdD (Br Col)

Graduate Diploma Offered
Graduate Diploma in Advanced Professional Studies in Education

This diploma is laddered to the Master of Education program in Educational Practice. See “Educational Practice” on page 312 for details.

Graduate Diploma in Advanced Professional Studies in Education

This diploma program, administered through Field Programs, consists of a minimum of 30 credit hours in 500 division EDPR courses. (The total credit hours may vary, depending on the program content but will, in no case, be less than 30 credit hours of 500 division EDPR courses.) Course work from other programs or universities may not be transferred into this graduate diploma program.

Graduate diploma programs are developed in co-operation with other educational partners (e.g. school districts and consortia, Ministry of Education regional offices) and all courses are offered at off-campus sites. Each program addresses a theme that is relevant to the educational community. Students normally progress through the program as a cohort. Significant program portions may be supported via the Internet. Students who are unable to follow a cohort must complete 30 credit hours, at least 18 of which must be in the given theme.

Admission
The minimum requirements for admission are as follows.

• a bachelor’s degree from a recognized university
• a teaching certificate based on a recognized teacher preparation program, and
• submitted evidence of the student’s ability to undertake advanced work in education.

Under exceptional circumstances, applicants without a teaching certificate may be considered for admission

A.M. MacKinnon, BSc, BED, MSc (Calg), EdD (Br Col)
Meeting program application requirements does not guarantee program admission. Students are admitted annually in the fall term. All applicants must meet the application deadline. Only complete applications are considered. To apply on-line and pay the application fee, visit www.sfu.ca/graduatestudies/apply.htm. For information about how to apply, visit the Faculty of Health Sciences’ website at www.fhs.sfu.ca/gradApplInfo.php.

Core Degree Requirements

Students complete a minimum of 43 credit hours of course work, plus either a capstone project (PPH 897) if they choose to complete the practicum stream, or a thesis project (HSCI 691) if they select a research intensive option.

Students who choose to take longer to complete the program should plan a minimum of two courses per term. In this case, HSCI 691 is completed twice – once in any spring term, and again in the fall term – before moving to the practicum.

The practicum stream core courses (see below) must be completed before moving to the practicum.

Note that the graduate general regulations govern the time allowed to complete a master’s degree (see “1.12.2 Master’s Degree” on page 249).

PraCtriCum streame core course requirements (22 credit hours)

Students who choose the practicum stream must complete all of the following.

- HSCI 691-0 Seminars in Population and Public Health*
- HSCI 801-4 Biostatistics
- HSCI 802-4 Principles of Epidemiology for Public Health
- HSCI 803-5 Research Methodology for the Health Sciences
- PPH 860-3 Environmental and Occupational Health
- PPH 870-3 Disease Prevention and Control
- PPH 880-0 Practicum
- PPH 897-3 MSc Project

"normally students complete HSCI 691-0 Seminars in Population and Public Health in the fall and spring term of their first year"

Enrolling for the MSc Project (PPH 897)

Normally in the term following completion of the practicum, students will enroll in PPH 897 MSc Project. Students will work with their supervisors to develop the final project. They will continue to enroll in the MSc Project course until it is completed and successfully defended as described in Graduate General Regulations 1.9 (page 247) and 1.10 (page 248).

thesis stream core course requirements (25 credit hours)

Students who choose the thesis stream must complete all of the following.

- HSCI 691-0 Seminars in Population and Public Health
- HSCI 801-4 Biostatistics
- HSCI 802-4 Principles of Epidemiology for Public Health
- HSCI 803-5 Research Methodology for the Health Sciences
- HSCI 898-6 MSc Thesis
- PPH 860-3 Environmental and Occupational Health
- PPH 870-3 Disease Prevention and Control

"normally students complete HSCI 691 in the fall and spring terms of their first year."
Enrolling for the Thesis
Upon embarking on their thesis research, thesis stream students should enroll in HSCI 988 MSc Thesis, and continue to enrol in this course until the thesis is completed and successfully defended, as described under the Graduate General Regulations 1.9 and 1.10. See "1.9 Preparation for Examinations" on page 247 and "1.10 Examinations" on page 248.

PPH 880 Practicum
Unless the thesis option is selected, students will complete a practicum which may be undertaken during any term, but cannot be started until students complete the core courses (HSCI 801, 802, 803, PPH 860, 870).

Generalist Concentration
Students may choose this concentration (instead of the global health concentration noted below) which focuses on health policy and planning for health care delivery, health promotion and disease prevention, environmental and occupational health, and methods for assessing population health. It offers a choice of elective course work, permitting some flexibility with regard to areas of focus and/or concentration. The concentration prepares established professionals and recent university graduates for positions of leadership in population and public health. Courses cover health sciences from the level of systems, communities and populations, encompassing and transcending individual and clinical perspectives.

In addition to the core courses (see "Core Degree Requirements" on page 315), students in this concentration must complete the following courses.

Practicum Stream Course Work and Requirements (21 credit hours)
Students who choose the practicum stream must complete all of the following.

PPH 821-3 Concepts and Principles of Population and Public Health
PPH 822-3 Social and Behavioral Contexts of Health and Disease
and one of
GLOH 810-3 Health Systems
PPH 823-3 Analysis of Health Care Delivery Systems
plus four courses (minimum of 12 credit hours) of electives to be chosen from HSCI, PPH, or GLOH graduate courses, or from appropriate Simon Fraser University graduate courses. With the approval of the supervisor and the graduate program chair.

Theses Stream Requirements (18 credit hours)
Students who choose the thesis stream must complete all of the following.

PPH 821-3 Concepts and Principles of Population and Public Health
PPH 822-3 Social and Behavioral Contexts of Health and Disease
and one of
GLOH 810-3 Health Systems
PPH 823-3 Analysis of Health Care Delivery Systems
plus three courses (minimum of nine credit hours) of electives to be chosen from HSCI, PPH, or GLOH graduate courses, or from appropriate Simon Fraser University graduate courses (with the approval of the supervisor and the program chair).

Global Health Concentration
Students may choose this concentration (instead of the generalist concentration noted above) which applies the skills and knowledge of population and public health in international contexts. Such international contexts include strategies for promoting health and preventing disease in socially and culturally diverse settings, or analyzing ethical issues including the social, political, economic and cultural factors that produce health disparities worldwide. Other international contexts include formulating public policy that is sensitive to societal investment in health and related trade-offs, or evaluating the organization and performance of health systems. Further international contexts include identifying and controlling environmental threats to health; assessing the impact of globalization processes (the global movement of capital, goods, ideas and people) on health; and working with global health organizations.

In addition to the core courses (see "Core Degree Requirements" on page 315), students must complete the following courses.

Practicum Stream Course Work and Requirements (21 credit hours)
Students who choose the practicum stream must complete all of the following.

GLOH 820-3 Concepts on Principles of Global Health
GLOH 840-3 Health, Human Security, Social Justice
GLOH 850-3 Globalization and Health
GLOH 890-3 Health, Gender and Development
and one of
GLOH 810-3 Health Systems
PPH 823-3 Analysis of Health Care Delivery Systems
and two of
GLOH 815-3 Health Policy-making in Global Context
GLOH 835-3 Program Planning and Evaluation in Global Health (or HSCI 890*)
GLOH 880-3 Advocacy and Communication in Global Health
one elective course in a related discipline, which may be outside of the Faculty of Health Sciences, with the approval of the supervisor and the graduate program chair.

Theses Stream Course Work and Requirements (18 credit hours)
Students who choose the thesis stream must complete all of the following.

GLOH 820-3 Concepts and Principles of Global Health
GLOH 840-3 Health, Human Security, Social Justice
GLOH 850-3 Globalization and Health
GLOH 890-3 Health, Gender and Development
and one of
GLOH 810-3 Health Systems
PPH 823-3 Analysis of Health Care Delivery Systems
and one of
GLOH 815-3 Health Policy-making in a Global Context
GLOH 835-3 Program Planning and Evaluation in Global Health (or HSCI 890*)
GLOH 880-3 Advocacy and Communication in Global Health
one elective course in a related discipline, which may be outside of the Faculty of Health Sciences, with the approval of the supervisor and the graduate program chair.

Global Health Diploma in Global Health
This diploma is a stand-alone credential that serves the needs of those who would like complementary training in the basics of global health practice. The program provides graduate training to individuals who are interested in learning more about global health methods and concepts. In addition to core course work, students will be directed to relevant elective course work to help them apply learning experiences to their interests and activities in the field of global health. The diploma is useful both for clinical training (e.g. medicine or nursing), academic training in complementary fields (e.g. development, international relations, public policy) for those who wish to work internationally, or those who wish to learn more about current challenges in global health research and practice.

Course Work and Requirements
Students are required to complete a minimum of 22 credit hours of course work including the following core courses.

GLOH 820-3 Concepts and Principles of Global Health
GLOH 850-3 Globalization and Health
HSCI 801-4 Biostatistics
HSCI 802-4 Principles of Epidemiology for Public Health

Elective Courses
In addition to the required core courses shown above, students must complete a minimum of three elective courses. Two of these should be GLOH graduate courses. The third course can be chosen from GLOH, HSCI or PPH graduate courses, or from other Simon Fraser University graduate programs. Students must choose electives in consultation with the graduate program co-ordinator and/or the graduate program chair.

Course Credit
Students in this program, or in the master of science in population and public health program, who have complete any or all of the following GLOH courses, cannot complete corresponding 800 division GLOH courses for further credit: GLOH 510, 520, 530, 610, 615, 620, 630, 535, 640, 650, 680 or 690.

Students who have completed GLOH 660 or 670 cannot take PPH 860 or 870 for further credit.

Students who have completed PPH 897 under the title Seminar in Workplace Integrated Learning, or GLOH 698 under the title Practicum Project in Global Health cannot complete PPH 897 for further credit.

Institute for Health Research and Education
Director: D. MacLean, MA, MHS (Tor), MD (Dal), Associate Directors: C.B. Dean, BSc (Sask), MMath, PhD (Wat), M. V. Hayes, BA, MSc, PhD (McM), 778.782.4821 Tel, 778.782.5977 Fax, www.ihre.sfu.ca, ihre@sfu.ca
The Institute for Health Research and Education (IHRE) promotes and facilitates research collaborations that bridge the basic biomedical sciences, clinical interfaces, societies, cultures, and the health of populations, health services and systems, and technology of health. It provides a focus for researchers from all sectors of health, and provides infrastructure to promote and foster cross-disciplinary research collaborations and the creation and promotion of new knowledge. Applications lie in the understanding of health issues from population-based, individual, and biological perspectives, and development and transfer of new technologies and treatments into the community. The IHRE coordinates a range of activities that provide library holdings in the areas of health, provided expert personnel to assist with grant applications, and skilled personnel to maintain health-related instrumentation. It has also served to foster and initiate the Faculty of Health Sciences, a venue for instructional programs open to students in September 2005, starting with a master's degree in Population and Public Health.
Faculty of Science

Research Facilities
Faculty of Science research programs, housed in modern research laboratories, are serviced by a wide range of facilities and equipment. The research complement includes 194 faculty members, 87 post-doctoral fellows and research associates and 400 to 500 graduate students. Biological research is enhanced by fresh and salt water aquarium facilities, a quarantined insectary, an 11 metre research vessel, and boat and vehicle transports. The Bamfield Marine Sciences Centre on Vancouver Island is available as a teaching and research facility for marine biology and oceanography. The marine centre is operated jointly by the Universities of Alberta, British Columbia, Calgary, Simon Fraser University and the University of Victoria. Experimental facilities are available at TRIUMF, a 500 MeV proton accelerator; for the study of, for example, high energy nuclear reactions, muon chemistry and nuclear decay systems. TRIUMF is a joint venture of the University of Alberta, University of British Columbia, Simon Fraser University, the University of Victoria and Carleton University.

Department of Biological Sciences

Graduate Program Chair
T.D. Williams BSc (Exe), PhD (Brist)

Faculty and Areas of Research
See “Department of Biological Sciences” on page 210 for a complete list of faculty.

A.T. Bedenbach – population genetics, biometrics
L.I. Bendell-Young – ecotoxicology, environmental toxicology
S.R. Bisgrove – cell biology
F. Breden – population genetics, evolution of social behavior
I.M. Coté – marine conservation
B.J. Crespi – behavioral ecology
J.K. Christiansen – organismal physiology
L.M. Dill – behavioral ecology
E. Elle – plant evolutionary ecology
D.J. Green – avian ecology, avian populations, conservation biology
G.J. Gries – behavioral ecology, chemical ecology, semiochemicals
A.S. Harestad – wildlife biology
W.M. Hart – marine invertebrates
N.H. Haunerland – biochemistry, insect physiology
H. Hutter – developmental neurobiology
C.J. Kennedy – biochemical and aquatic toxicology
A.R. Kermoda – plant molecular biology
L.F.W. Lesack – ecosystem biogeochemistry, limnology, land-water interactions
C.A. Lowenberger – parasitology, insect vectors
R.W. Mathewes – paleoecology, paleontology
J. Mattson – Arabidopsis developmental genetics
A.R. Mooers – biodiversity, molecular analysis
M.M. Moore – fungal pathogenesis, toxicology, microbiology
R.A. Nicholson – pesticide biochemistry, toxicology
I. Novales Flamarique – visual ecology, neuroethology, evolution
W. Palen – aquatic conservation
E. Palsson – mathematical biology, cell modeling
A.L. Plant – root specific gene expression, osmotic stress, seed specific gene expression
Z.K. Punja – plant biotechnology and pathology
J.D. Reynolds – salmon conservation and management
G.L. Rintoul – cell neurophysiology
B.D. Roitberg – population dynamics, insect behavioral ecology
M.A. Silverman – cellular neuroscience
T.D. Williams – physiological ecology
M.L. Winston – apiculture, social insects
R.C. Ydenberg – behavioral ecology

Admissions
Requirements for a Master’s Degree
The minimum requirements are those stated in the “Graduate General Regulations” on page 243. Any additional requirements imposed by the supervisory committee must be satisfied. Individual departments may require additional graduate courses. Students who, in the opinion of the supervisory committee, lack certain graduate course prerequisites may be required to complete some undergraduate courses.

Requirements for a Doctoral Degree
A PhD candidate must present a thesis embodying original research. In addition, 15 credit hours beyond the BSc degree is required. Of these, at least 12 must be graduate courses and the remaining three may be graduate or upper division undergraduate within the candidate’s department or an ancillary department. These are minimum faculty requirements. Individual departments may have additional requirements.

Full-Time Study
Full-time study for the MET, MPM, MSc, and PhD normally is a period of intensive work during which not more than 20 employment hours per week may be undertaken by the candidate. These refer to clock hours either at external employment off campus or employment on campus as a teaching assistant or research assistant performing specified duties not directly related to the candidate’s program of study.

Supervisory Committee
For information on supervisory committees, see “Graduate General Regulations” on page 243.

Thesis
The thesis must be presented and lodged in the University library. Details concerning the final form for binding are available from the library.

PhD Examinations
Examinations may be oral and/or written and all committee members must certify the results. See “I.9.4 Preparation for Examination of Doctoral Thesis” on page 248 for further regulations.
Environmental Toxicology

**MET Admission Requirements**
Before entering the Master of Environmental Toxicology (MET) program, the following or equivalents should be completed. These prerequisites may be waived by the departmental graduate studies committee under special circumstances on recommendation from the director.

- BISC 312-3 Environmental Toxicology I
- BISC 313-3 Environmental Toxicology II
- CHEM 282-3 Organic Chemistry II
- MBB 221-3 Cellular Biology and Biochemistry

**MET Program Requirements**
Student chooses a senior supervisor after admission, with program director consultation. A supervision committee is formed by the beginning of the third term of full time equivalent enrolment. Students complete a project on a specific environmental toxicology aspect which may be based on original field, laboratory or library research. The student is supervised on this project by the senior supervisor while enrolled in BISC 656. In addition to submission of a report at project completion, the student prepares for an oral exam according to **Graduate General Regulations** (see “1.9 Preparation for Examinations” on page 247) and will be examined according to section 1.10 (see “1.10 Examinations” on page 248).

This program may be taken on a part time basis. Every MET program consists of a minimum of 32 graduate credit hours, including the following courses.

### Core Courses
- BISC 650-3 Environmental Risk Assessment: Human Health Risk Assessment and Ecological Effects-based Risk Assessment
- BISC 651-3 Environmental Toxicology Tests I: Ecological Effects-based Tests
- BISC 652-3 Environmental Toxicology Tests II: Mammalian Toxicity Tests
- BISC 654-3 Food and Drug Toxicology
- BISC 655-3 Environmental Toxicology Seminar
- BISC 656-0 Master of Environmental Toxicology Project
- BISC 855-3 Biochemical Toxicology
- STAT 650-5 Quantitative Analysis in Resource Management and Field Biology

### Elective Courses
Students must complete one of
- BISC 854-3Ecotoxicology
- EASC 613-3 Groundwater Hydrology
- REM 610-5 Management of Contaminants in the Environment
- and six credit hours chosen from the following
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 850-3 Industrial Microbiology
- BISC 883-3 Special Topics in Environmental Toxicology
- KIN 851-3 Recent Advances in Experimental Carcinogenesis
- REM 612-5 Simulation Modelling in Natural Resource Management

### Professional Registration and Certification
Eligibility for the certification examination of the American Board of Toxicology Inc. can be met through the Master of Environmental Toxicology program and four years of work experience.

### Environmental Toxicology Courses
The following courses are offered for this program:
- BISC 650, 651, 652, 654, 655, 656, 657, 658.

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**Co-operative Education**
This option allows students to gain work experience outside the University. Award of the degree is not contingent upon satisfactorily completing this option. Students enrolling in the co-op program must note the regulations governing minimum fee requirements. See “1.10 Examinations” on page 248.

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**Department of Chemistry**
CB03S Shrum Science Centre, 778.782.3590 Tel, 778.782.3765 Fax, www.sfu.ca/chemistry

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**Admission Requirements**
See “Graduate General Regulations” on page 243 for admission requirements.

**Biological Sciences**

**MSc and PhD Program Requirements**
All master's and doctoral programs require a thesis based on original research.

Each PhD student must pass an oral candidacy exam prior to the end of the fourth program term or the second term after transfer from the MSc program. The exam concentrates on the student's research area, follows a written PhD research proposal submission, and is graded acceptable/unacceptable. Students with an unacceptable grade must pass a second exam within six months; a second unacceptable rating requires program withdrawal.

For those with a master's degree, the PhD program requires a minimum of three courses totalling not less than eight credit hours. Of these, at least six are in graduate courses and the remaining hours may be chosen from graduate or upper division undergraduate courses within the candidate's department, or in an ancillary department. Where advance approval is obtained, a PhD student may take up to one-half of the above course requirement at another university for credit toward the PhD.

PhD students entering directly from a bachelor's program or transferring from the MSc program must complete 15 credit hours in total (i.e. one additional three credit course beyond the University MSc requirement) (see “1.7.2 Residence Requirement for the Master's Degree” on page 246). Additional course work may be supervised by the supervisory committee.

For graduate program information, contact the chair, department graduate studies committee.

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**Pest Management**

**MPM Program Requirements**
This Master of Pest Management (MPM) program is a research-based program that is distinct from an MSc program in its strongly applied approaches to learning and discussion of biological principles, and in interfacing science with problems facing society. The program is based on original research with relevance to pest management (BISC 849).

Each MPM student must complete all of BISC 601-2 Agriculture, Horticulture and Urban Pest Management
- BISC 602-2 Forest Pest Management
- BISC 847-3 Pest Management in Practice and two of
- BISC 816-3 Biology and Management of Forest Insects
- BISC 817-3 Social Insects
- BISC 841-3 Plant Disease Development and Control
- BISC 842-3 Insect Development and Reproduction
- BISC 843-3 Population Processes
- BISC 844-3 Biological Controls
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 851-3 Vertebrate Pests
- BISC 852-3 Biology of Animal Disease Vectors
- BISC 884-3 Special Topics in Pest Biology and Management
- and one additional 800 division elective (three credit hours).

**Pest Management Courses**
- BISC 601, 602, 603, 604, and 605 are designed for students undertaking the Master of Pest Management degree. They may be taken for credit subject to prior approval by the student’s supervisory committee.

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American Board of Toxicology Inc. can be met with relevance to pest management (BISC 849).

Each MPM student must complete all of
- BISC 601-2 Agriculture, Horticulture and Urban Pest Management
- BISC 602-2 Forest Pest Management
- BISC 847-3 Pest Management in Practice and two of
- BISC 816-3 Biology and Management of Forest Insects
- BISC 817-3 Social Insects
- BISC 841-3 Plant Disease Development and Control
- BISC 842-3 Insect Development and Reproduction
- BISC 843-3 Population Processes
- BISC 844-3 Biological Controls
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 851-3 Vertebrate Pests
- BISC 852-3 Biology of Animal Disease Vectors
- BISC 884-3 Special Topics in Pest Biology and Management
- and one additional 800 division elective (three credit hours).

**Pest Management Courses**
- BISC 601, 602, 603, 604, and 605 are designed for students undertaking the Master of Pest Management degree. They may be taken for credit subject to prior approval by the student’s supervisory committee.

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Simon Fraser University 2007 • 2008 Calendar
Degrees Offered
The department offers courses leading to the MSc and PhD degrees.

Degree Requirements
All students will be assigned a graduate supervisory committee who meets with the student at least once a year to assess progress. The first meeting must occur before the end of the second term of enrollment. At this meeting the student makes an oral presentation of the research proposal; in subsequent years research progress must be reported.

MSc Program
Admission Requirements
See “Graduate General Regulations” on page 243.

Degree Requirements
Course Work
The minimum requirement for the master’s degree is 12 credit hours of graduate courses.

Research
A major part of this program is original research. A thesis describing this must be submitted and defended at program conclusion.

PhD Program
Admission Requirements
See “Graduate General Regulations” on page 243.

Degree Requirements
Course Work
For students entering with a BSc or equivalent: 15 credit hours of graduate courses. For students entering with a master’s degree: six credit hours of graduate courses not including CHEM 801.

Research
A major portion of this program will be devoted to original research. A thesis embodying new and significant results must be presented and defended at the conclusion of the degree program.

Transfer from MSc to PhD Program
Transfer from the MSc to the PhD program without submitting an MSc thesis must satisfy University requirements. Evidence of research potential will be judged by the graduate program committee.

Molecular Biology and Biochemistry
See “Molecular Biology and Biochemistry MBB” on page 435.

Chemical Physics
Students who wish to undertake chemical physics interdisciplinary work may apply to the Department of Chemistry or to the Department of Physics. See “Graduate General Regulations” on page 243 for chemical physics under special arrangements.

Co-operative Education
A co-operative education option is offered to gain work experience outside the academic sphere. Students who are currently enrolled in the MSc program may apply for enrollment in CHEM 881 and 882. This option is only tenable after the completion of an MSc thesis and defense but before formal graduation. Enrollment in these courses requires the approval of the graduate program committee.

Department of Earth Sciences
7201 Technology and Science Complex 1, 778.782.5387 Tel, 778.782.4198 Fax, www.sfu.ca/earth-sciences
Chair
D.J. Thorelson BSc, MSc (Br Coll), PhD (Cal)
Graduate Program Chair
A.J. Calvert BA (Oxf), PhD (Camb)
Professor Emeritus
M.C. Roberts, BSc (Lond), MA (Tor), PhD (Iowa), PGeo
Faculty and Areas of Research
See “Department of Earth Sciences” on page 214 for a complete list of faculty.

Research
Graduates will be required to conduct original research and report their results in a thesis.

PhD Program
See “1.3.4 Admission to a Doctoral Program” on page 244 for minimum University requirements for admission to a doctoral program.

Transfer from Master’s to PhD Program
Students accepted to the PhD program will normally have completed a master’s degree in science or engineering. However, a student without a master’s degree may be admitted to the PhD program after at least 12 months in the MSc program if
• the student has completed at least 75% of the credit hours that are required for the master’s program with at least a 3.67 cumulative grade point average
• the student has shown outstanding potential for research
• the student’s supervisory committee, departmental graduate program committee, and the senate graduate studies committee grant approval.

Course Work
For students entering with a BSc or equivalent, 15 graduate credit hours in addition to EASC 600, 900, 901 and 998 is required. For those entering with a master’s, six credit hours of graduate courses in addition to EASC 600, 901, 990 and 998 is required.

Graduate courses are chosen from the Course Catalogue (page 327), or with the graduate chair’s approval, from related graduate courses in other departments/programs including physical geography, chemistry, physics, biological sciences, and the resource and environmental management. Course selections will include no more than six credit hours from 700 division EASC courses.

Students must maintain a 3.0 CGPA in course work (see “1.5.1 Normal Grading System” on page 245). Failure to do so is taken as evidence of unsatisfactory progress (see “1.5.4 CGPA Required For Continuation and Graduation” on page 245).

Additional course work may be assigned by the supervisory committee, based on the results of the oral candidacy examination.

In addition to normal course work, PhD students present two research seminars (EASC 900 and 901); at least one should be based on completed or nearly completed thesis work. One seminar may address any earth sciences topic approved by the supervisory committee. PhD students are expected to attend all the research seminars in the department.

Oral Candidacy Examination
Every earth sciences PhD student must complete an oral candidacy examination prior to the end of the
fourth term of enrollment, or in the first term after transferring from the MSc program. The candidate must submit a written thesis proposal to the supervisory committee and present it at the beginning of the oral candidacy exam, which is followed by an oral exam. The student demonstrates an ability to conduct independent research, and have a sufficient command of the studied discipline to explain the research proposal and defend it. The examination must be successfully completed prior to undertaking any significant thesis research.

The exam concentrates on the major and two minor research areas, as agreed by the supervisory committee and student. It is graded satisfactory/unsatisfactory by an examining committee of the supervisory committee and one external member. Students with an unsatisfactory grade must pass a second exam within six months; a second unsatisfactory rating results in program withdrawal.

**Thesis**

Students define and undertake original research, the results of which are reported in a thesis and defended before an examining committee (see “1.9.3 Examining Committee for Doctoral Thesis” on page 248). Students must conform to residence requirements (see “1.7.3 Residence Requirement for the Doctoral Degree” on page 247).

The program will normally be completed in 12 terms (four years) and not more than 15 terms (five years).

The student’s progress is reviewed every 12 months by a supervisory committee of three or more faculty (see “1.8.1 Progress Evaluation” on page 247). The senior supervisor will be an earth sciences faculty member who has been approved by the department’s graduate committee. At each annual review, the student presents a summary of work to date, with the first review being the oral candidacy exam, when the thesis proposal is to be presented. Students not making satisfactory research progress or failing to demonstrate satisfactory knowledge and understanding of recent publications in their area of research, or failing to have their revised research proposal approved by the supervisory committee within 18 months of admission may be required to withdraw (see “1.8.2 Review of Unsatisfactory Progress” on page 247).

**Geography Program**

7123 Robert C. Brown Hall, 778.782.3321 Tel, 778.782.5841 Fax, www.sfu.ca/geography

Chair
E.J. Hickin BA, PhD (Syd), PGeo

Graduate Program Chair
N.K. Blomley BSc, PhD (Brist)

**Faculty and Areas of Research**

See “Department of Geography” on page 161 for a complete list of faculty.

T.A. Brennan – glacial geography, quaternary environments, regional paleoecology
S. Dragicevic – geographic information science, spatial analysis and modeling
M.F. Garvert – meteorology and climatology
N. Hedley – geovisualization and cartography
E.J. Hickin – fluvial geomorphology
I. Hutchinson – quaternary environments, coastal studies
L.F.W. Lesack – ecosystem biogeochemistry, land and water interactions, limnology
A.C.B. Roberts – cultural, historical, paleo environments, remote sensing, photogrammetry
M.G. Schmidt – soil science, forest ecology

N.C. Schuurman – geographic information systems, spatial data and integration
I. Tromp-van Meerveld – hillslope and catchment hydrology
J. Venditti – fluvial geomorphology

**Degrees Offered**

The Department of Geography offers a program leading to the MSc degree in the Faculty of Science with emphasis on earth surface processes and environmental geoscience, specifically in aspects of geomorphology, biogeography, soils, climatology and hydrology; spatial information science, remote sensing, GIS and spatial analysis.

Students interested in pursuing a PhD degree in physical geography should see the Department of Geography entry in the Faculty of Arts and Social Sciences section (page 291).

**MSc Program**

**Admission Requirements**

Normally, MSc candidates should have a BSc 3.25 CGPA in geography or a related discipline to enter the program. Admission is in the fall term. Applications should be completed by February 1.

**Supervisory Committee**

The MSc candidate, once admitted, works under a faculty advisor’s guidance, pending the choice of a supervisory committee. The supervisory committee, normally consisting of two faculty members, one of whom may be drawn from outside the department, will be chosen by the start of the second term.

**Degree Requirements**

All candidates complete the degree requirements (30 credit hours) in six terms. The program requires the submission of a thesis (18 credit hours). The remaining 12 credit hours will be comprised of required and elective courses.

**Course Work**

Students complete 12 credit hours minimum (three courses) plus GEOG 600 and 601 which are non-credit courses graded satisfactory/unsatisfactory.

Attendance is compulsory to obtain a satisfactory grade. Students normally complete GEOG 606 as part of the 12 credit hours. With the advisor’s consent, another course is possible. The remaining seven credit hours are composed of two courses from the list below, or with the graduate chair’s approval, from related graduate courses in other departments such as biological sciences, chemistry, physics, mathematics, earth sciences, resource and environmental management and computing science. Students with deficiencies may be asked to complete more course work.

**Thesis**

The MSc program requires the submission and successful defence of a thesis. Normally, MSc students present proposed research at a one-day conference (research day) held annually in the spring term. A written proposal should be submitted to the student’s supervisory committee, defended in colloquium and approved, by the end of the second term and prior to the start of substantive research. The thesis normally involves the conceptualization of a problem and the collection, analysis and interpretation of empirical data. The recommended maximum length of an MSc thesis is 120 pages (including bibliography, but excluding appendices). The completed thesis is judged by the candidate’s examining committee at an oral defence.

**Courses**

The following GEOG courses are offered for the Faculty of Science Geography Program: GEOG 600, 601, 606, 611, 612, 613, 614, 615, 617, 651, 653, 655, 656, 691, 697.

For a full list of GEOG courses, see “Geography GEOG” on page 397.

**Department of Mathematics**

K10512 Shrum Science Centre, 778.782.3059 Tel, 778.782.4947 Fax, www.math.sfu.ca

Chair
T. Archibald BMath (Wat), MA (York), MA, PhD (Tor)

Graduate Program Chairs
L. Stacho MSc, PhD (Slovak Acad Sc) S. Ruuth BMath (Wat), MSc, PhD (Br Col)

**Faculty and Areas of Research**

See “Department of Mathematics” on page 221 for a complete list of faculty.

B.R. Alsipach – graph theory, discrete mathematics
T. Archibald – history of mathematics
J. Bell – algebra, analytic number theory, combinatorics, asymptotic enumeration
J.L. Berggren – history of mathematics, algebra
P.B. Borwein – analysis, computation, number theory
T.C. Brown* – algebra, combinatorics
N. Bruin – arithmetic geometry, number theory
C. Chauve – bioinformatics, algorithmics, combinatorics
I. Chen – number theory, arithmetic geometry
K-K.S. Choi – number theory, algebra
R. Choksi – calculus of variations, partial differential equations, and applications to material science
A. Das** – variational techniques; interior solutions in general relativity
R. Fetecau – numerical methods, mathematical modelling, analysis for multi-scale phenomena; geometric mechanics and its relation to numerical algorithms for mechanical systems, symplectic integration, variational methods for collisions
L. Goddyn – combinatorics
J. Jedwab – discrete mathematics, exploratory computation, digital communication
M.C.A. Kropinski – numerical solutions of nonlinear differential equations; fluid dynamics
A.H. Lachlan* – mathematical logic
Y. Lee – algebraic and computational number theory, coding theory and cryptography
A.S. Lewis – analysis, optimization
P. Lisonok – combinatorics, coding theory
Z. Lu – algorithm design and analysis for large-scale continuous discrete optimization and stochastic programming, application of operations research in bioinformatics, data mining, finance, logistics and supply chain, manufacturing and structural design
M. Mishina – combinatorial functional equations, algorithmic and algebraic combinatorics, computer algebra
B. Mohar – topological graph theory, graph colouring, algebraic graph theory, graphs and matrices, infinite graphs
M.B. Monagan – algebra, computer algebra
D. Muraki – asymptotic analysis and modelling for the physical sciences, nonlinear waves and dynamics, atmospheric fluid dynamics
A.M. Oberman – nonlinear partial differential equations, numerical analysis, math finance
A. Punnen – discrete/combinatorial organization and applications
N.R. Reilly – algebra
R.D. Russell – numerical analysis; numerical solution of differential equations, dynamical systems
S. Ruuth – scientific computing, differential equations, dynamics of interfaces  
C.Y. Shen* – electromagnetic scattering; large scale scientific computing  
L. Stacho – graph theory, discrete mathematics  
T. Stephen – combinatorial optimization, approximation algorithms, complexity and combinatorics  
J. Stooke – fluid dynamics, scientific computing, industrial mathematics  
B.S. Thomson* – analysis  
M.R. Trummer – numerical analysis; differential equations, integral equations  
J.F. Williams – asymptotic analysis for nonlinear PDEs, adaptive numerical methods and industrial mathematical modelling  
R. Wittenberg – nonlinear dynamics, differential equations  
*emeritus

Admission Requirements

See “1.1 Degrees Offered” on page 243 for admission requirements. Applicants normally submit aptitude section scores and an appropriate advanced section of the Educational Testing Service’s graduate record exams. Applicants whose first language is not English will be asked to submit TOEFL results.

Co-operative Education

The department has introduced co-op education into its graduate program to allow students to gain work experience outside the academic sphere. Students who are currently enrolled in the MSc or PhD programs may apply.

Applied and Computational Mathematics

Admission Requirements

See “Graduate General Regulations” on page 243 for admission requirements. Applicants normally submit scores in the aptitude section and an appropriate advanced section of the Educational Testing Service’s graduate record examinations. Applicants with backgrounds in areas other than mathematics (for example, a bachelor’s degree or its equivalent in engineering or physics) may be considered suitably prepared for these programs.

MSc Program Requirements

An MSc candidate will normally obtain 26 credit hours beyond courses taken for the bachelor’s degree. These 26 will consist of at least four courses chosen from the core courses list below, with at least one from each of the pairs APMA 900, 901; APMA 920, 922; APMA 930, 935; a further seven graduate credit hours; and a further three credit hours which may be graduate or 400 undergraduate division. Normally courses that are cross-listed as undergraduate courses cannot be used to satisfy graduate course requirements. The six core courses are APMA 900-4 Advanced Mathematical Methods I  
APMA 901-4 Advanced Mathematical Methods II  
APMA 920-4 Numerical Linear Algebra  
APMA 922-4 Numerical Solution of Partial Differential Equations  
APMA 930-4 Fluid Dynamics  
APMA 935-4 Analysis and Computation of Models

In addition to this course requirement (normally completed in five terms), the student completes a project which involves a significant computational component and submits and successfully defends a project report. This project should be completed within about one term.

PhD Program Requirements

A PhD candidate must obtain at least a further eight graduate level credit hours beyond the MSc requirements. Candidates who are admitted to the PhD program without an MSc are required to obtain credit or transfer credit for an amount of course work equivalent to that obtained by students with an MSc.

Candidates pass an oral candidacy exam given by the supervisory committee before the end of the fourth full time term. The exam consists of a proposed thesis topic defence and supervisory committee questions about related proposed research topics. The exam follows submission of a written PhD research proposal and is graded pass/fail. Those with a fail complete a second exam within six months. A student falling twice will normally withdraw.

A PhD candidate must submit and defend a thesis based on his/her original work that embodies a significant contribution to mathematical knowledge.

Courses

See page 328 for APMA course descriptions. The APMA courses replace courses formerly labelled MATH. For MATH 800-889 descriptions, see page 430. Course descriptions for STAT 801-890 can be found on page 458. Except for selected topics courses, students with credit for a MATH labelled course may not take the corresponding APMA course for further credit.

Mathematics

MSc Program Requirements

Thesis Option

A MSc candidate is normally required to complete at least 18 graduate credit hours beyond courses taken for the applicant’s bachelor’s degree. Of these, at least 12 credit hours should be from courses numbered 800 or above. The course work should normally involve at least two different areas of mathematics subject to the approval of the student’s supervisory committee and the department’s graduate studies committee. The candidate is also required to submit a satisfactory thesis and defend it at an oral examination based on the thesis and related topics (MATH 899).

Mathematics

PhD Program Requirements

A PhD candidate is normally required to complete the MSc requirements (either option) and at least 12 further graduate credit hours. Of these, at least eight credit hours should be from courses numbered 800 or above. Subject to the approval of the department’s graduate studies committee, a PhD candidate with a MSc is deemed to have completed the MSc requirements for the purpose of the PhD program requirements. The graduate course work should normally involve at least four different areas of mathematics subject to the approval of the student’s supervisory committee and the department’s graduate studies committee.

Candidates will normally pass a two stage general exam. The first stage consists of successful completion of a comprehensive examination (MATH 878). In the second, students present to their supervisory committee a written thesis proposal and then defend this at an open oral defence (MATH 879). The supervisory committee evaluates the thesis proposal and defence, and either passes or fails the student. A candidate cannot take either stage of the general examination more than twice. Both stages must be completed within six full time terms of initial enrolment in the PhD program.

Students must submit and successfully defend a thesis which embodies a significant contribution to mathematical knowledge (MATH 899).

See “Graduate General Regulations” on page 243 for further information and regulations.

Courses

700 division courses may be offered in conjunction with a 400 division course. Students may not take a 700 division course if it is offered in conjunction with a 400 division course which they have taken previously.

Department of Molecular Biology and Biochemistry

8166 South Science Building, 778.782.5630 Tel, 778.782.5583 Fax, www.sfu.ca/mbb  
Chair  
B.P. Brandhorst AB (Harv), PhD (Calif)  
Graduate Program Chair  
D. Sen BA (Camb), MPhil, PhD (Yale)  
Faculty and Areas of Research  
See “Department of Molecular Biology and Biochemistry” on page 225 for a complete list of faculty.

D.L. Baillie – developmental genetics, genomics  
C.T. Beh – cholesterol molecular genetics and genomics  
B.P. Brandhorst – developmental biology and gene regulation  
F.S.L. Brinkman – bacterial genetics and bioinformatics  
N.J. Chen – bioinformatics and functional genomics, neuroscience  
R.B. Cornell – membrane bond enzymes  
L. Craig – structure and assembly of the Type IV pili and related virulence factor  
W.S. Davidson – molecular, population and evolutionary genetics  
N. Harden – developmental genetics, signal transduction  
N.C. Hawkins – developmental genetics  
B.M. Honda – molecular biology and gene regulation  
M.R. Leroux – protein structure and function  
M.W. Paetzel – crystallographic analysis of protein targeting and translocation  
F.F. Pio – physical biochemistry, x-ray crystallography  
L.M. Quarmby – cell biology  
J.K. Scott – immunoochemistry, immunology  
D. Sen – nucleic acid biochemistry, chromosome structure  
J.L. Thewalt – membrane biophysics, nuclear magnetic resonance  
P.J. Unrua – RNA-catalyzed chemical reactions, early metabolism, self-replicating systems
E.M. Verheyen – Drosophila developmental genetics, cell fate determination
E.C. Young – Ligand-induced conformational changes in ion channels

Adjunct Faculty
T. Borgford – protein biochemistry, biotechnology
S. Gorski – developmental and cellular genetics, apoptosis
R. Holt – large scale DNA sequencing, neurogenomics
S. Jones – bioinformatics of cancer, pharmacogenetics
M. Marra – functional genomics of cancer, bioinformatics, large scale DNA mapping and sequencing
G.B. Morin – proteomics, protein interactions
F. Ouelfette – bioinformatics, data management tools
E. Stringham – developmental and molecular genetics of cellular signalling

Associate Members
For areas of research, refer to the department listed.
A.T. Beekenbach, Biological Sciences
A.J. Bennet, Chemistry
N.R. Branda, Chemistry
F. Breden, Biological Sciences
E. Emberly, Physics
N. Forde, Physics
N.H. Haunerland, Biological Sciences
C. Krieger, Kinesiology
P.C.H. Li, Chemistry
C. Lowenberger, Biological Sciences
M.M. Moore, Biological Sciences
M. O'Neill, Chemistry
B.M. Pinto, Chemistry
E. Plettner, Chemistry
G.F. Tibbonis, Kinesiology
D. Vocadlo, Chemistry

Obtain information about the department and its faculty research from the MBB graduate program assistant, Department of Molecular Biology and Biochemistry, Simon Fraser University, 888 University Drive, Burnaby, BC, V5A 1S6, 778.782.5631, mbb@sfu.ca

Graduate Diploma in Bioinformatics
The Department of Molecular Biology and Biochemistry and the School of Computing Science co-operate in offering this program which provides advanced education in bioinformatics for students with a bachelor's degree in molecular biology, cell biology, biochemistry, computer science, mathematics, or related disciplines. Program admission is highly competitive.

This program supports students sponsored by the Canadian Institutes of Health Research (CIHR) Bioinformatics in Health Science Training Grant in which Simon Fraser University is a full partner with the University of BC and the BC Genome Sciences Centre. Students who are not part of the program are strongly encouraged to choose their courses from those offered at Simon Fraser University.

The program requires 33 credit hours, consisting of four core courses (12 hours), three elective courses (9 hours) and a minimum of two practicum rotation terms (12 hours). Students must obtain a B or better in each course or practicum. The student's advisory committee consists of a senior mentor and two other participating faculty members drawn from the faculty at Simon Fraser University, UBC and the BC Genome Sciences Centre. Students who are not part of the program are strongly encouraged to choose their courses from those offered at Simon Fraser University.

Core Courses
It is recommended that all four core courses be completed in the first term, dependent upon term course offerings.

MBB 801 and 806. This can include up to three credit hours of MBB colloquia. PhD students normally enrol in MBB 806 at the earliest opportunity following four program terms. With the approval of the supervisory committee, MSc students may apply to the MBB graduate program committee for transfer to the PhD program.

For those entering with an MSc, six credit hours minimum are required including MBB 806 and 801 if not already completed. MBB 806 must be taken at the first opportunity following two terms of program enrollment.

Research
A major portion of the PhD program is original research. An original thesis which contributes new knowledge is presented and defended at the program’s end according to “1.7.5 Doctoral Thesis” on page 247 of the Graduate General Regulations. In addition, all MBB PhD candidates present a public seminar on their research.

E.C. Young – Ligand-induced conformational changes in ion channels
A.J. Bennet, Chemistry
N.R. Branda, Chemistry
F. Breden, Biological Sciences
E. Emberly, Physics
N. Forde, Physics
N.H. Haunerland, Biological Sciences
C. Krieger, Kinesiology
P.C.H. Li, Chemistry
C. Lowenberger, Biological Sciences
M.M. Moore, Biological Sciences
M. O'Neill, Chemistry
B.M. Pinto, Chemistry
E. Plettner, Chemistry
G.F. Tibbonis, Kinesiology
D. Vocadlo, Chemistry

Graduate Diploma in Bioinformatics
The Department of Molecular Biology and Biochemistry and the School of Computing Science co-operate in offering this program which provides advanced education in bioinformatics for students with a bachelor's degree in molecular biology, cell biology, biochemistry, computer science, mathematics, or related disciplines. Program admission is highly competitive.

This program supports students sponsored by the Canadian Institutes of Health Research (CIHR) Bioinformatics in Health Science Training Grant in which Simon Fraser University is a full partner with the University of BC and the BC Genome Sciences Centre. Students who are not part of the program are strongly encouraged to choose their courses from those offered at Simon Fraser University.

The program requires 33 credit hours, consisting of four core courses (12 hours), three elective courses (9 hours) and a minimum of two practicum rotation terms (12 hours). Students must obtain a B or better in each course or practicum. The student’s advisory committee consists of a senior mentor and two other participating faculty members drawn from the faculty at Simon Fraser University, UBC and the BC Genome Sciences Centre. Students who are not part of the program are strongly encouraged to choose their courses from those offered at Simon Fraser University.

Core Courses
It is recommended that all four core courses be completed in the first term, dependent upon term course offerings. Students must complete one of CMPT 341-3 Introduction to Computational Biology, CMPT 881-3 Special Topics in Theoretical Computing Science, and one of MBB 441-3 Bioinformatics, MBB 741-3 Bioinformatics, and one of CMPT 505-3 Problem-based Learning in Bioinformatics, MBB 505-3 Problem-based Learning in Bioinformatics*, and one of CMPT 506-3 Critical Research Analysis**, MBB 506-3 Critical Research Analysis**.

*course is completed at Simon Fraser University, BC Cancer Agency, and the Centre for Molecular Medicine and Therapeutics
**course is completed at Simon Fraser University and University of BC

Elective Courses
In each of the first, second and third terms, students must also complete at least three elective courses in each term from the following.

CMPT 354-3 Database Systems I
CMPT 740-3 Database Systems II
CMPT 770-3 Computer Graphics
CMPT 775-3 Scientific Visualization
CPSC 304-3 Database Management and Design†
CPSC 504-3 Advanced Database Design and Data Mining†
CPSC 536A-3 Topics in Algorithms and Complexity – Bioinformatics†
MEDG 505-3 Genome Analysis†
MBB 331-3 Molecular Biology
MBB 435-3 Genomic Analysis (or MBB 835)†
MBB 442-3 Proteomics (or MBB 842-3)
MBB 659-3 Special Topics in Bioinformatics
MBB 669-3 Special Topics in Genomics†
MBB 679-3 Special Topics in Proteomics
MBB 831-3 Molecular Evolution of Eukaryote Genomes
MBB 832-3 Molecular Phylogeny and Evolution
STAT 547-3 Statistical Problems Arising in Genomics†
STAT 890-4 Statistics: Selected Topics³

1 credit will be given for only one of MBB 435 or MEDG 505
2 special topics courses are given upon student demand and instructor availability
3 STAT 890 is a Special Topics course and course content will vary by course offering
4 CPSC 304, CMPT 354 and MBB 331 will not count toward elective requirements; they will be recommended if the student is deficient in either computational or life sciences background
5 credit will be given for only one of CMPT 740 and CPSC 504
†course is completed at University of BC

Practicum Courses
In addition to elective courses as outlined above, students take their first practicum course in their second term, and their second practicum course in their third term, dependent upon term course offerings. Students complete these practicums by choosing at least two of CMPT 611-6 Research Rotation I (or MBB 611)*, CMPT 612-6 Research Rotation II (or MBB 612)*, CMPT 613-6 Research Rotation III (or MBB 613)*
*course is completed at Simon Fraser University, University of BC, and BC Cancer Agency

Courses Offered by Other Departments
Upon the supervisory committee’s recommendation and with the department graduate studies committee’s approval, MBB students may take relevant courses from other departments toward their degree. Some courses of interest may include, but are not limited to CHEM 752, 754 and 811.

Graduate Course Work at Other Universities
With the supervisory committee’s recommendation and department graduate studies committee approval, up to six credit hours taken elsewhere that didn’t result in a degree may apply to requirements, but not exceed more than half the required credit hours in addition to MBB 801, 802 and 806.

Simon Fraser University 2007 • 2008 Calendar
Degrees Offered
The Department of Physics offers programs leading to the MSc and PhD degrees in physics.

MSc Program
Admission Requirements
To qualify for admission, a student must have at least second class standing or equivalent, in honors physics, honors mathematics and physics, engineering physics, or electrical engineering. See “Graduate General Regulations” on page 243.

Degree Requirements
Course Work
The minimum requirement is 17 credit hours, of which at least 14 must be at the graduate level and will normally include
PHYS 801-2 Student Seminar
PHYS 810-3 Fundamental Quantum Mechanics
PHYS 821-3 Electromagnetic Theory
and one of
PHYS 811-3 Advanced Topics in Quantum Mechanics
PHYS 841-3 Equilibrium Statistical Mechanics
Additional undergraduate courses, including prerequisites to required graduate courses, may be required to remedy deficiencies in background.

Research
Part of the program is conducting original research. A thesis describing this research is submitted and defended at the program’s conclusion.

PhD Program
Admission Requirements
To qualify for admission, a student must have a master's degree or the equivalent in physics. Also see “Graduate General Regulations” on page 243.

Degree Requirements
Course Work
The minimum requirement consists of nine hours of graduate credit beyond the master's. Faculty of Science requirements must also be met.

Research
A major portion of this program is conducting original research. A thesis, embodying new and important results or original research, must be presented and defended at the conclusion of the degree program.

Admission from a Master's Program to the PhD Program
A student may be admitted from an MSc with a CGPA that normally will be at least 3.67 calculated over a minimum of 15 graduate credit hours, and approval of the student’s supervisory committee and senate graduate studies committee.

Language Requirement
In certain areas of research, familiarity with languages other than English may be important so a student's supervisory committee may require a reading knowledge of one such language.

Biophysics
Students who wish to undertake biophysics interdisciplinary work may apply to the Department of Physics or the Department of Chemistry. Those who wish to work in chemical physics under special arrangements should see "1.3.4 Admission to a Doctoral Program" on page 244.

Chemical Physics
Students who wish to undertake chemical physics interdisciplinary work may apply to the Department of Physics or the Department of Chemistry. Those who wish to work in chemical physics under special arrangements should see "1.3.4 Admission to a Doctoral Program" on page 244.
Admission Requirements
See “1.3.4 Admission to a Doctoral Program” on page 244 for admission requirements. Applicants whose first language is not English normally submit the Test of English as a Foreign Language results. Applicants with degrees in areas other than statistics are encouraged to apply provided they have some formal training in statistical theory and practice.

Actuarial Science

MSc Program
Students seeking actuarial science graduate studies may, with permission of their supervisory committee and the graduate studies committee, follow the statistics program (shown below), but with course requirements and project content adjusted for actuarial science as follows. Students normally complete 30 credit hours of course work including
STAT 801-4 Statistics
and at least two of
ACMA 820-4 Stochastic Analysis of Insurance Portfolios
ACMA 821-4 Advanced Actuarial Models
ACMA 822-4 Risk Measures and Ordering
and at least two of
ACMA 850-4 Actuarial Science, Selected Topics
STAT 802-4 Multivariate Analysis
STAT 804-4 Time Series Analysis
STAT 805-4 Non-Parametric Statistics and Discrete Data Analysis
STAT 806-4 Lifetime Data Analysis
STAT 870-4 Applied Probability Models
STAT 890-4 Statistics: Selected Topics

As well, students must submit and successfully defend a project based on an actuarial science problem (see “1.10.1 Thesis Examination” on page 248).

Statistics

MSc Program
The program offers a wide range of statistical techniques and provides experience in the practical application of statistics. It teaches statistical expertise for careers in either theoretical or applied statistics. Students complete at least 30 credit hours in statistics and related fields beyond those that were taken for the bachelor’s degree. Of these 30, at least 24 will be graduate courses or graduate seminars, and the remaining six may be chosen from graduate courses or those 400 division undergraduate courses which may be taken for credit for the BSc in statistics. Normally these courses will include
STAT 801-4 Statistics
STAT 811-2 Statistical Consulting I
STAT 812-2 Statistical Consulting II
and at least four of
STAT 802-4 Multivariate Analysis
STAT 804-4 Time Series Analysis
STAT 805-4 Non-Parametric Statistics and Discrete Data Analysis
STAT 806-4 Lifetime Data Analysis
STAT 870-4 Applied Probability Models
STAT 890-4 Statistics: Selected Topics
STAT 891-2 Seminar

As well, students must submit and successfully defend a project based on some problem of statistical analysis, as outlined in the Graduate General Regulations (see “1.10.1 Thesis Examination” on page 248). This problem will often arise out of the statistical consulting service. Students with a good undergraduate background in statistics will normally complete the course work in four terms. The project, including the defence, is expected to require two terms or less. Students with backgrounds in other disciplines, or with an inadequate background in statistics, may be required to take certain undergraduate courses in the department in addition to the above requirements.

PhD Program
A candidate will generally obtain at least 30 credit hours beyond those for the bachelor’s degree. Of these, at least 22 will be graduate courses and the remaining eight may be from graduate courses or those 400 division undergraduate courses which may be taken for credit for the BSc in statistics. Students who hold an MSc in statistics are deemed to have earned 18 of the 22 graduate hours and four of the eight undergraduate or graduate hours required. Candidates normally pass a general examination covering a broad range of senior undergraduate statistics material. A candidate ordinarily cannot take the general exam more than twice. This exam is normally completed within four full time terms of initial PhD enrolment.

Students submit and successfully defend a thesis which will embody a significant contribution to statistical knowledge. See “Graduate General Regulations” on page 243 for further information and regulations.

Co-operative Education
Students in the MSc or PhD program may obtain work experience during their graduate studies by participating in the co-operative education program. Employment lasting one or two terms with government agencies, companies or other organizations employing statisticians is arranged for qualified students. Such employment often provides the problem which forms the basis of the MSc project.
Course Catalogue
# Course Catalogue

## Actuarial Mathematics ACMA 327

**Faculty of Science**

ACMA 210-3 Mathematics of Compound Interest  

ACMA 315-3 Credibility Theory  
Limited fluctuation credibility theory; full credibility, partial credibility. Greatest accuracy credibility theory: the Bayesian methodology, the credibility premium, the Buhlmann model, the Buhlmann-Straub model, exact credibility, linear versus Bayesian versus no credibility. Empirical Bayes parameter estimation: nonparametric estimation, semiparametric estimation, parametric estimation. Simulation: basics of simulation, simulation in actuarial modeling. Covers part of the syllabus for Exam C of the Society of Actuaries, and covers practical applications such as computational aspects of pricing and reserving, and risk measurement of insurance portfolios. Prerequisite: MATH 232, STAT 285, and ACMA 210 (with a grade of C+ or higher). Quantitative.

ACMA 335-3 Risk Theory  

ACMA 395-3 Special Topics in Actuarial Science  
Topics in areas of actuarial science not covered in the regular certificate curriculum of the department. Prerequisite: dependent on the topics covered.

ACMA 425-3 Actuarial Mathematics II  

ACMA 445-3 Loss Models: Estimation and Selection  

ACMA 465-3 Mathematics of Demography  

ACMA 470-3 Property and Casualty Insurance  
APMA 900-4 Advanced Mathematical Methods I

Hilbert spaces. Calculus of variations. Sturm-Liouville problems and special functions. Green’s functions in one dimension. Integral equations. Prerequisite: MATH 314 or equivalent. Students with credit for MATH 900 may not take APMA 900 for further credit. Recommended: MATH 419.

APMA 901-4 Advanced Mathematical Methods II

First order partial differential equations. Characteristic. Eigenfunction expansions and integral transforms. Discontinuities and singularities; weak solutions, Green’s functions. Variational methods. Prerequisite: MATH 314 or equivalent. Students with credit for MATH 901 may not take APMA 901 for further credit. Recommended: MATH 418.

APMA 902-4 Applied Complex Analysis

Review of complex power series and contour integration. Conformal mapping, Schwarz-Christoffel transformation. Special functions. Asymptotic expansions. Integral transform. Prerequisite: MATH 322 or equivalent. Students with credit for MATH 836 or 902 may not take APMA 902 for further credit.

APMA 905-4 Applied Functional Analysis

Infinite dimensional vector spaces, convergence, generalized Fourier series. Operator Theory; the Fredholm alternative. Application to integral equations and Sturm-Liouville theory. Spectral theory. Prerequisite: MATH 900 or permission of the instructor. Students with credit for MATH 905 may not take APMA 905 for further credit.

APMA 910-4 Ordinary Differential Equations

The solutions and properties of ordinary differential equations and systems of ordinary differential equations in the real and complex domains. Prerequisite: MATH 415 or equivalent. Students with credit for MATH 842 or 910 may not take APMA 910 for further credit.

APMA 912-4 Partial Differential Equations

An advanced course on partial differential equations. Topics covered usually include quasi-linear first order systems and hyperbolic, parabolic and elliptic second-order equations. Prerequisite: MATH 901 or permission of the instructor. Students with credit for MATH 845 or 912 may not take APMA 912 for further credit.

APMA 920-4 Numerical Linear Algebra

Direct and iterative methods for the numerical solution of linear systems, factorization techniques, linear least squares problems, eigenvalue problems. Techniques for parallel architectures. Students with credit for MATH 850 or 920 may not take APMA 920 for further credit.

APMA 921-4 Numerical Solution of Ordinary Differential Equations

Study of the practical numerical methods for solving initial and boundary value problems for ordinary differential equations. Students with credit for MATH 851 or 921 may not take APMA 921 for further credit.

APMA 922-4 Numerical Solution of Partial Differential Equations

Analysis and application of numerical methods for solving partial differential equations. Finite difference methods, spectral methods, multigrid methods. Students with credit for MATH 852 or 922 may not take APMA 922 for further credit.

APMA 923-4 Numerical Methods in Continuous Optimization

Numerical solution of systems of nonlinear equations, and unconstrained optimization problems. Newton method, Quasi-Newton methods, secant methods, and conjugate gradient algorithms. Students with credit for MATH 853 or 923 may not take APMA 923 for further credit.

APMA 929-4 Selected Topics in Numerical Analysis

Study of a specialized area of numerical analysis such as computational fluid dynamics, approximation theory, integral equations, integral transforms, computational complex analysis, special functions, numerical quadrature and multiple integrals, constrained optimization, finite elements methods, sparse matrix techniques, or parallel algorithms in scientific computing.

APMA 930-4 Fluid Dynamics

Basic equations and theorems of fluid mechanics. Incompressible flow. Compressible flow. Effects of viscosity. Prerequisite: MATH 361 or equivalent. Students with credit for MATH 850 or 930 may not take APMA 930 for further credit. Recommended: MATH 462.

APMA 934-4 Selected Topics in Fluid Dynamics

Study of a specialized area of fluid dynamics such as hydrodynamic stability, multiphase flow, non-Newtonian fluids, computational fluid dynamics, boundary-layer theory, magnetic fluids and plasmas, bio- and geo-fluid mechanics, gas dynamics. Prerequisite: APMA 930 or permission of the instructor.

APMA 935-4 Analysis and Computation of Models

Analysis of models from the natural and applied sciences via analytical, asymptotic and numerical studies of ordinary and partial differential equations. Prerequisite: MATH 418 and MACM 316 or equivalent. Students with credit for MATH 883 or 935 may not take APMA 935 for further credit.

APMA 939-4 Selected Topics in Mechanics of Solids

Study of a specialized area of the mechanics of solids such as composite materials, micromechanics, fracture, plate and shell theory, creep, computational solid mechanics, wave propagation, contact mechanics. Prerequisite: APMA 935 or permission of the instructor.

APMA 981-4 Selected Topics in Continuum Mechanics

APMA 982-4 Selected Topics in Mathematical Physics

APMA 990-4 Selected Topics in Applied Mathematics

Archaeology ARCH

Faculty of Arts and Social Sciences

ARCH 100-3 Ancient Peoples and Places

A broad survey of human cultural development from the late Palaeolithic/Palaeoindian periods (ca 40,000 BP) to the rise of civilization and empires, in both the Old and New Worlds. Breadth-Social Sciences.

ARCH 131-3 Human Origins


ARCH 200-3 Special Topics in World Prehistory

Non-specialized introductory summaries of selected regional topics in world prehistory. Breadth-Social Sciences.

ARCH 201-3 Introduction to Archaeology

A survey of methods used by archaeologists to discover and interpret the past. Examples will be drawn from selected sites and cultures around the world. Students who have taken ARCH 101 may not register in ARCH 201. Breadth-Social Sciences.

ARCH 223-3 The Prehistory of Canada

A summary review of the pre-contact native cultures of Canada, from their beginnings to the arrival of Europeans, as revealed by archaeology. Lectures focus on how and when the first humans appeared in the land now known as Canada, and how their cultures changed over time, organized in terms of eight ‘archaeological regions,’ beginning with the Atlantic coast and then moving west and north. Breadth-Social Sciences.

ARCH 226-3 The Prehistory of Religion: Shamans, Sorcerers and Saints

Charts the emergence and changes in the expression of human religious behavior. It covers the earliest rituals of the Palaeolithic, the importance of fertility cults, ancestor cults, alliance rituals, shamans, witchcraft, and monotheism. Prerequisite: any lower division archaeology or anthropology course. Breadth-Humanities/Social Sciences.

ARCH 252-3 Ancient Egypt and Africa

Exploration of the major cultural developments in Africa from the origin of humankind to the rise of several ancient civilizations, with special emphasis on ancient Egypt. Students are exposed to various approaches taken by palaeoanthropologists.
prehistoric archaeologists, historians and Egyptologists. Prerequisite: Students who have taken ARCH 200 under this title may not take this course for further credit. Breadth-Humanities/Social Science.

ARCH 272-3 Archaeology of the Old World
A survey of the major centres of Old World cultural development from the Paleolithic to the Bronze Age. Basic concepts used in reconstructing prehistoric cultures, and the artifactual and contextual evidence for the development of culture. Prerequisite: ARCH 100 or 201. Breadth-Social Sciences.

ARCH 273-3 Archaeology of the New World
A survey of prehistoric cultures of North and South America. The peopling of the New World, the rise of the pre-Columbian civilizations of Mexico and Peru, and the cultural adaptations by prehistoric peoples to other parts of the New World. Prerequisite: ARCH 100 or 201. Breadth-Social Sciences.

ARCH 301-3 Prehistoric and Indigenous Art
Art styles and traditions of prehistoric and preliterate peoples in one or more world cultural areas. Breadth-Humanities.

ARCH 302-3 Art of Ancient Civilizations
A descriptive survey of art and architecture of major ancient civilizations in Africa, Asia, the Mediterranean basin and the Americas. Prerequisite: students with credit for ARCH 331 (special topics course) may not take ARCH 302 for further credit. Part of the course content will be delivered via WebCT and the World Wide Web. Students must have frequent broadband access.

ARCH 311-5 Archaeological Dating
A study of various scientific methods of dating archaeological samples, including Carbon 14, thermoluminescence, obsidian-hydration, fission track, potassium-argon, magnetic, and other dating techniques.

ARCH 330W-3 Prehistory of Latin America
Intensive study of the prehistoric cultures of Latin America. Emphasis will be on the development of the civilizations of prehistoric Mexico and Peru. Prerequisite: ARCH 273 or LAS 140. ARCH 330 is identical to LAS 330, and students cannot receive credit for both courses. Writing.

ARCH 332-3 Special Topics in Archaeology I
This course will be offered from time to time to meet special needs of students and to make use of specializations of visiting faculty members. Prerequisite: to be announced.

ARCH 333-3 Special Topics in Archaeology II
This course will be offered from time to time to meet special needs of students and to make use of specializations of visiting faculty members. Prerequisite: to be announced.

ARCH 334-3 Special Topics in Archaeology III
This course will be offered from time to time to meet special needs of students and to make use of specializations of visiting faculty members. Prerequisite: to be announced.

ARCH 335-5 Special Laboratory Topics in Archaeology
This is a laboratory course that will be offered from time to time to meet special needs of students and to make use of specializations of visiting faculty members. Prerequisite: to be announced.

ARCH 336-3 Special Topics in Prehistoric and Indigenous Art
Art styles and traditions of prehistoric and preliterate peoples in selected world cultural areas. Prerequisite: to be announced. Breadth-Humanities.

ARCH 340-5 Zooarchaeology
An introduction to the study of animal remains from archaeological sites. Coverage of the major concepts and methods used in the study of animal remains and detailed practical coverage of the vertebrate skeleton. Prerequisite: ARCH 201.

ARCH 344-3 Primate Behaviour
The evolution of the primate order and the ecology and behavior characterizing the different grades of primates: prosimians, monkeys, and apes. Current trends in interpreting primate behavior are emphasized. Prerequisite: ARCH 131 or any lower division biology course.

ARCH 348-5 Archaeological Conservation
An introduction to archaeological conservation, the processes affecting the condition of archaeological materials prior to excavation, during excavation, during analysis, exhibition and during reposition. Successful completion of this course will give archaeologists a good understanding of the various materials they encounter during excavation and how to preserve these artifacts and other materials. It will not qualify students to be professional archaeological conservators. Prerequisite: six credit hours in Archaeology, including ARCH 201. Students who have taken ARCH 335-5 Special Topics in Archaeology: Archaeological Conservation may not take ARCH 348-5 for further credit.

ARCH 349-5 Management of Archaeological Collections
The philosophy, policies and practices of the care of archaeological cultural collections. This lecture and laboratory course treats the practical problems of designing museum programs within a framework of legal responsibilities for collections. Contemporary issues such as repatriation will be discussed. Prerequisite: three 200 division archaeology courses.

ARCH 350-3 Practicum I
First semester of work experience in the Archaeology Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: normally 45 semester hours with a CGPA of 3.0 and the following courses are recommended: both ARCH 131 and 201; either ARCH 272 or 273; and three of ARCH 372, 373, 376, 377, 386, 442.

ARCH 351-3 Practicum II
Second semester of work experience in the Archaeology Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: normally 45 semester hours with a CGPA of 3.0 and ARCH 350.

ARCH 360-5 Native Cultures of North America
A descriptive study of the cultures of North American natives north of Mexico, as they were at initial European contact, organized on a culture area basis. Native groups in each area will be discussed in terms of languages, population estimates, early post-contact history and its impact on traditional ways of life, dominant ethnographic economic/adaptive emphases, socio-political organization, religion, ceremony and warfare. Prerequisite: ARCH 201 and 273.

ARCH 365-3 Ecological Archaeology
Deals with the techniques for reconstruction of past environments, as well as the effect of environment on past settlements and people. Environment as considered in the course will encompass the presence of other settlements, and deal with relationships among settlements. Prerequisite: ARCH 201.

ARCH 370-3 Western Pacific Prehistory
The exploration of prehistoric developments in the Western Pacific region, beginning with the first traces of humans, dealing with problems in the rise of civilization, and finally, tracing the voyages of the early Pacific navigators. Prerequisite: ARCH 272.

ARCH 372-5 Material Culture Analysis
Analysis and interpretation of archaeological material culture. This lecture and laboratory course combines the practical problems of recognition and interpretation of archaeological specimens, typology, seriation, and statistical procedures with the basic principles of archaeological theory. Prerequisite: ARCH 201.

ARCH 373-5 Human Osteology
A detailed study of the human skeleton with emphasis on lab and field techniques. Prerequisite: ARCH 131.

ARCH 376-5 Quantitative Methods in Archaeology
Theory, method, and operation of the application of statistical techniques to the description, classification, analysis, and interpretation of archaeological data. Prerequisite: ARCH 201, and either STAT 203 (formerly STAT 103) or STAT 204.

ARCH 377-5 Historical Archaeology
An introduction to theory and method in North American historical archaeology. Laboratory instruction is provided in historic artifact analysis and interpretation. Prerequisite: ARCH 201 and one lower division ARCH course.

ARCH 378-3 Pacific Northwest North America
The prehistory and cultural traditions of the region. The content, antecedents, relationships, and changes in these cultures through time. Technological, socio-economic, and environmental factors in culture growth. Prerequisite: ARCH 273.

ARCH 379-3 Archaeology of the American Southwest
The prehistory and cultural traditions of the region. The content, antecedents, relationships, and changes in these cultures through time. Technological, socio-economic, and environmental factors in culture growth. Prerequisite: ARCH 273.

ARCH 385-5 Paleoanthropology
The relationship between culture and biology in prehistoric human evolution. The recognition and critical evaluation of the significance of the similarities and differences between fossil human types. Prerequisite: ARCH 131 and 272.

ARCH 386-3 Archaeological Resource Management
Surveys the origins, implementations, and need for archaeological heritage legislation on an international and national scale. Topical issues associated with contract archaeology, public archaeology, native heritage, and avocational societies are incorporated. Prerequisite: ARCH 201.

ARCH 390-5 Archeobotany
An introduction to the recovery and analysis of macroscopic archaeological plant remains. The major methodological and interpretive issues in archeobotany will be covered, with an emphasis on plant domestication in selected regions of the world. Prerequisite: ARCH 201 and either 272 or 273.

ARCH 432-5 Advanced Physical Anthropology
An intensive investigation of the theory and problem areas in physical anthropology. Prerequisite: ARCH 373 and either 344 or 385.

ARCH 433-6 Background to Field Work
Lectures cover the archaeological background and rationale for specific field research questions, the critical relationship in any field project between the research questions asked and the methods and techniques employed, and the craft of field work including use of equipment, specific excavating, recording and cataloguing techniques, field safety and camp life. Prerequisite: normally taken concurrently with ARCH 406 and ARCH 435 or ARCH 131 and 201; at least one group I course, permission of the department.

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Course Catalogue – Archaeology ARCH 329

COURSES
ARCH 433-3 Exercises in Mapping and Recording
A series of exercises in which the student must demonstrate the ability to apply the various recording and mapping skills covered in the course. The graded exercises are done individually and in teams, both on-campus and in the field. Prerequisite: normally taken concurrently with ARCH 433 and 434; ARCH 131 and 201; at least one group I course; permission of the department.

ARCH 435-6 Field Work Practicum
A practical application of the background knowledge and specific techniques of ARCH 433 and 434. It takes place in a research oriented field excavation. Evaluation of student performance is based upon assessments of efficiency and accuracy of excavation techniques/recording procedures, and upon the student's overall contribution to the smooth functioning of the team. Prerequisite: normally taken concurrently with ARCH 433 and 434; ARCH 131 and 201; one group I course; permission of the department.

ARCH 438-5 Geoarchaeology
This course introduces the concept of archaeological sites as active constituents in natural Quaternary land-forming and land-altering systems. Lectures will focus on all processes which may have contributed to the present geologic contexts of archaeological sites and their sedimentary and pedological contents. Prerequisite: ARCH 201 and either 272 or 273.

ARCH 442-5 Forensic Anthropology
Current techniques in identification of recent human skeletal remains. Prerequisite: ARCH 373.

ARCH 450-3 Practicum III
Third semester of work experience in the Archaeology Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: normally 45 semester hours with a CGPA of 3.0 and ARCH 351.

ARCH 451-3 Practicum IV
Fourth semester of work experience in the Archaeology Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: normally 45 semester hours with a CGPA of 3.0 and ARCH 450.

ARCH 471-5 Archaeological Theory
The cultural, evolutionary, physical, and distributional principles which underlie the prediction and reconstruction of the past. Prerequisite: ARCH 131, 201, 272 and 273.

ARCH 479-3 Directed Readings
Directed readings for upper level students who desire to study selected topics in depth. Prerequisite: permission of the department.

ARCH 480-5 Directed Laboratory/Library/Field Research
A course in which students can undertake specific laboratory, library or field based research supervised by a faculty member. It is open to students from other departments. Prerequisite: permission of the department.

ARCH 485-5 Lithic Technology
An in-depth study of how to manufacture and analyze stone tools. Includes rock and mineral identification, stone working by students, fracture mechanics, and relevance to theoretical problems. Prerequisite: ARCH 372.

ARCH 498-5 Honors Reading
Directed readings in a selected field of study under the direction of a faculty member. Papers will be required. Prerequisite: permission of the department.

ARCH 499-5 Honors Thesis
An honors thesis of some ten to fifteen thousand words will be written under the direction of a faculty member. Prerequisite: permission of the department.

ARCH 871-5 Archaeological Theory
Critical evaluation of new approaches to the study of the human past.

ARCH 872-0 Graduate Seminar in Archaeology and Prehistory
A seminar on selected problems in archaeological science and prehistory. Grading will be restricted to satisfactory/unsatisfactory (S/U).

ARCH 873-2 Graduate Seminar in Archaeology and Prehistory
A seminar on selected problems in archaeological science and prehistory. Students may take ARCH 873 for credit once in the graduate program.

ARCH 876-5 Research Design
Seminar focusing on the development of thesis research design and data analysis.

ARCH 892-5 Directed Readings in Prehistory
Directed readings under the supervision of a faculty member in the prehistory of any selected region of the world.

ARCH 893-3 Directed Readings
Intensive readings under the supervision of a faculty member in an area of interest related to the student's program.

ARCH 894-3 Special Topics
This course will be offered from time to time to meet special needs of students and make use of specialization of visiting faculty members.

ARCH 895-5 Special Topics
This course will be offered from time to time to meet special needs of students and to make use of specialization of visiting faculty members.

ARCH 896-5 Directed Laboratory/Library/Field Research
Directed laboratory, library or field research under the supervision of a faculty member in an area of interest related to the student's program.

ARCH 898-6 MA Thesis
ARCH 899-6 PhD Thesis

Asia-Canada ASC
Faculty of Arts and Social Sciences
Department of Humanities

ASC 101-3 Introduction to Asia-Canada Studies I
An introductory course on Asia-Canada interactions. It will survey various issues, both historical and contemporary, including those involving Asian-Canadians.

ASC 102-3 Introduction to Asia-Canada Studies II
An introductory course on Asian civilizations in three areas: East Asia, Southeast Asia and South Asia. A survey course, it is designed to cover multiple dimensions of people's lives and history in Asia.

ASC 200-3 Introduction to Chinese Culture
An introductory course in traditional Chinese culture with a view to understanding contemporary Chinese society. Prerequisite: 15 credit hours. Students who have taken GS 201 or GS 251 may not take this course for further credit.

ASC 201-3 Introduction to Japanese Culture and History
An introductory course on Japanese culture and history. It is designed for students with no Japanese background and with no Japanese speaking ability. The course will cover the basic aspects of Japan: geography, history, culture, politics, economy, etc. Prerequisite: 15 credit hours. Students who have taken JAPN 250 may not take this course for further credit.

ASC 202-3 Studies in Asian Cultures
An introduction to East, Southeast or South Asian art, literature, history or philosophy. The emphasis will be on the cultural importance of the themes covered and on their relationship to contemporary societies. Prerequisite: 15 credit hours. Students who have taken GS 251 cannot take this course for further credit.

ASC 205-3 Special Topics: Field Studies in Chinese Culture
This course is part of the core courses offered in the China Field School covering topics on various aspects of Chinese culture and society, from Chinese medicine, martial arts, painting and calligraphy, etc. to contemporary life and local history in the area. Prerequisite: 15 credit hours. Students who have taken GS 201 or 251 may not take this course for further credit.

ASC 300-3 Asians and North Americans in Public Discourse
A cross-cultural examination of the ways we perceive and represent each other in public discourse, including literature, news media, cinema, and other education and entertainment media. Prerequisite: 45 credit hours and ASC 101 or 102 or permission of the instructor.

ASC 301-3 Asia-Canada Identities: Experiences and Perspectives
This course will explore the experience of Asian immigrants and their children, focusing in particular on social and cultural aspects. Prerequisite: 45 credit hours and ASC 101 or 102 or permission of the instructor.

ASC 302-3 Special Topics in Chinese Studies
Content will vary according to interests of faculty and students but will involve China-related study within one or more of the social science or humanities disciplines. Prerequisite: 30 credit hours. Recommended: ASC 200.

ASC 303-3 Special Topics in Japanese Studies
Content will vary according to interests of faculty and students but will involve Japanese-related study within one or more of the social science or humanities disciplines. Prerequisite: 30 credit hours. Recommended: ASC 200.

ASC 400-3 Selected Topics in Asia-Canada Studies
Prerequisite: 45 credit hours.

ASC 401-3 Directed Studies
Individual study. Prerequisite: ASC 101 or 102, and one ASC 300 level course and permission of the program director.

Biological Sciences BISC
Faculty of Science

BISC 100-4 Introduction to Biology
An introduction to the basic concepts of biology, emphasizing evolution as a unifying theme. Topics include cell structure, mitosis and meiosis, DNA structure and function, evolution and population and ecosystem ecology. Students with credit for BISC 101 or 102, or succeeding biology courses, may not take BISC 100 for further credit. Students with a C or better in Biology 12, who are considering a BISC Major, are encouraged to proceed directly to BISC 101 and 102. Breadth-Science.
BISC 101-4 General Biology
An introduction to the biochemical and physiological mechanisms of living organisms. Topics covered include cell structure and function, DNA replication and the flow of genetic information, enzyme function, metabolism and physiology of microorganisms, plants, and animals. Prerequisite: high school biology 12 (or equivalent) with a grade of C or better, or BISC 100. BISC 101 and 102 may be taken in any order, and are available for B-Sci credit, but are primarily designed to deliver prerequisite information to BISC majors and related departments and Faculties. Non-science students are encouraged to earn their B-Sci credits in other BISC breadth courses (e.g. BISC 110, 111, and 112). Breath-Science.

BISC 102-4 General Biology
Survey of the diversity of life, and its evolutionary history on earth. The student is introduced to the study of genetics, development, and evolution, giving an overview of how these processes interact to produce form and function. Also included are principles of behavior and ecological relationships of organisms to each other and their environment. Prerequisite: high school biology 12 (or equivalent) with a grade of C or better, or BISC 100, BISC 101 and 102 may be taken in any order, and are available for B-Sci credit, but are primarily designed to deliver prerequisite information to BISC majors and related departments and Faculties. Non-science students are encouraged to earn their B-Sci credits in other BISC breadth courses (e.g. BISC 110, 111, and 112). Breath-Science.

BISC 110-3 The Evolution and Diversity of Life on Earth
Current theories about the origin and evolution of life on this planet. The course will include a survey of the five kingdoms to emphasize both the structural and functional diversity of living forms, as well as the characteristics shared by members of each major group. Students having credit for BISC 102 may not take BISC 110 for further credit. Breath-Science.

BISC 111-3 Special Topics: Current Topics in Biology I
Selected topics in biology intended to fulfill breadth requirements for non-majors. Topics will vary depending on instructor. Breath-Science.

BISC 112-3 Special Topics: Current Topics in Biology II
Selected topics in biology intended to fulfill breadth requirements for non-majors Topics will vary depending on instructor. Breath-Science.

BISC 202-3 Genetics
Principles and concepts of the transmission of genetic information treated comparatively in man, animal, plant and microbe. Prerequisite: BISC 101 and 102.

BISC 204-3 Introduction to Ecology
An introduction to biotic-environmental relationships and dynamics; ecological concepts; population dynamics, variation, adaptation and evolution. Prerequisite: BISC 101 and 102. Credit will not be granted for both BISC 204 and GEOG 215.

BISC 272-3 Special Topics in Biology
Selected topics in areas not currently offered within the undergraduate course offerings in the Department of Biological Sciences. Prerequisite: to be announced in the Undergraduate Schedule of Classes and Examinations. Entry into this course normally requires completion of the lower division core for biological sciences, or permission of the department.

BISC 300-3 Evolution
The phenomenon of organic evolution, and the major forces leading to changes in allele frequencies over time, i.e. natural selection and genetic drift. Topics include adaptation, speciation, the origin of life, and the major evolutionary trends over geological time. Prerequisite: BISC 202. Recommended: BISC 204. Students with credit for BISC 400 may not take BISC 300 for further credit.

BISC 302-3 Genetic Analysis
Discussion and manipulations of some of the organisms and techniques applicable to genetic analysis. Prerequisite: BISC 202.

BISC 302W-3 Genetic Analysis
Discussion and manipulations of some of the organisms and techniques applicable to genetic analysis. Prerequisite: BISC 202. Writing.

BISC 303-4 Microbiology
The biology of micro-organisms and their significance in the understanding of cellular processes. Prerequisite: MBB 221.

BISC 304-3 Animal Ecology
A study of the interrelationships of animals and their physical and biotic environment. Prerequisite: BISC 204.

BISC 304W-3 Animal Ecology
A study of the interrelationships of animals and their physical and biotic environment. Prerequisite: BISC 204. Writing.

BISC 305-3 Animal Physiology
A comparative study of basic physiological mechanisms in invertebrates and vertebrates. Prerequisite: MBB 221 and PHYS 102 with a grade of C- or better.

BISC 306-4 Invertebrate Biology
An introduction to selected invertebrate phyla with an emphasis on functional morphology, diversity and ecology. Prerequisite: BISC 204.

BISC 307-3 Animal Physiology Laboratory
A laboratory course using contemporary techniques of animal physiological research. Prerequisite: BISC 305 and 329.

BISC 307W-3 Animal Physiology Laboratory
A laboratory course using contemporary techniques of animal physiological research. Prerequisite: BISC 305 and 329. Writing.

BISC 310-3 The Natural History of British Columbia
Field course on the ecology, distribution, and characteristics of organisms representative of various biotic regions of the province (both terrestrial and marine). Sampling techniques are emphasized. The course will normally be taught as a full-time, intensive, three week course with field trips of one to several days duration. Prerequisite: BISC 204, and one of the following: BISC 306, 316, 317, 326, 337.

BISC 312-3 Environmental Toxicology I
An introductory course in environmental toxicology which will concentrate on the biologist's perspective and will "bridge the gap" between traditional biology courses and formal toxicology courses. The course is required for a minor and extended studies diploma program in Environmental Toxicology. Prerequisite: BISC 101, 102 and 204 or EVSC 200, with grades of C- or better.

BISC 313-3 Environmental Toxicology II
This course introduces students to basic principles of toxicology and several classes of widely encountered environmental pollutants. Emphasis is on toxicology as an interdisciplinary science. This course is a prerequisite for all advanced toxicology courses. Prerequisite: MBB 221. Corequisite: BISC 312.

BISC 316-4 Vertebrate Biology

BISC 317-3 Insect Biology
Life histories, biomics, comparative morphology, and classification of insects and related organisms. A collection may be required, depending on instructor. Prerequisite: BISC 101 and 102.

BISC 326-3 Biology of Algae and Fungi
A survey of form, function, and genetics. Prerequisite: BISC 101 and 102.

BISC 329-4 Introduction to Experimental Techniques
This course is designed to introduce students to basic measurement methods and instrumentation as used in modern biology. Prerequisite: CHEM 121 and 122, MBB 221, PHYS 102, STAT 201.

BISC 333-3 Developmental Biology
Classical and modern experimental approaches will be described for understanding development of embryos of several species having common and distinctive features. These approaches are at the organismal, cellular, molecular and genetic levels. Prerequisite: BISC 202 and MBB 222. Students with credit for BISC 203 may not complete BISC 333 for further credit.

BISC 337-4 Plant Biology
An introductory course covering many aspects of plant biology including the origin and evolution of plants, basic anatomy, plant growth and development and the utilization and impact of plants in human society. Prerequisite: BISC 101 and 102.

BISC 341-3 Practicum I
First semester of work experience in the Biological Sciences Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the biological sciences co-operative education program.

BISC 342-3 Practicum II
Second semester of work experience in the Biological Sciences Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: BISC 341 and re-admission to the science co-operative education program.

BISC 357-3 Gene Cloning
Introduction to various techniques in gene cloning and the application of gene cloning. Laboratory exercises follow a sequence of events commonly practiced in many molecular genetics laboratories and include novel technologies such as cloning by site-directed recombination. Lecture content spans basic cloning in plasmids to novel large-scale genomics technologies. Prerequisite: BISC 202, MBB 221, MBB 222. Recommended: MBB 331. Credit will not be granted for both BISC 357 and MBB 308. Cannot be taken for credit if already taken as a Special Topics course.

BISC 366-3 Plant Physiology
The plant's physical environment and the physiological basis (mechanisms and principles) of the interaction between plants and their environment in relation to their survival and ecological distribution. Prerequisite: MBB 221.

BISC 367-3 Plant Physiology Laboratory
A laboratory course using contemporary techniques of plant physiological research. Prerequisite: BISC 329 and 366.

BISC 367W-3 Plant Physiology Laboratory
A laboratory course using contemporary techniques of plant physiological research. Prerequisite: BISC 329 and 366. Writing.

BISC 372-3 Special Topics in Biology
Selected topics in areas not currently offered within the undergraduate course offerings in the Department of Biological Sciences. Prerequisite: to be announced.
in the Undergraduate Schedule of Classes and Examinations.

**BISC 403-3 Current Topics in Cell Biology**

The lectures will explore two or three major themes in current cell biology, such as cell motility, the cell cycle, and cellular signalling. A critical component of the course is to develop an understanding of the experimental basis of our knowledge about cells.

Prerequisite: MBB 221 and 222.

**BISC 404-3 Plant Ecology**

The study of the distribution and abundance of plants, including how individuals, populations, and communities are affected by abiotic (climate, soil) and biotic (competition, herbivory) factors. A major focus will be on plant succession (pollination, defence, dispersal). Experimental and observational laboratory exercises are primarily conducted outdoors.

Prerequisite: BISC 204.

**BISC 404W-3 Plant Ecology**

The study of the distribution and abundance of plants, including how individuals, populations, and communities are affected by abiotic (climate, soil) and biotic (competition, herbivory) factors. A major focus will be on plant succession (pollination, defence, dispersal). Experimental and observational laboratory exercises are primarily conducted outdoors.

Prerequisite: BISC 204. Writing.

**BISC 405-3 Cell Physiology**

The physiology of cells with emphasis on the physical and chemical nature of specialized activities.

Prerequisite: BISC 307, or KIN 306, or BISC 305 and 329, all with grades of C- or better.

**BISC 406-3 Marine Biology and Oceanography**

An introduction to the marine environment, marine organisms and the ecological and oceanographic processes affecting them. Prerequisite: BISC 306 or 316.

**BISC 407-3 Population Dynamics**

An evaluation of factors influencing the natural fluctuation and regulation of plant and animal population numbers. Prerequisite: BISC 304 or 404.

**BISC 410-3 Behavioral Ecology**

An introduction to the evolution of behavior and its adaptiveness in a natural context.

Corequisite: BISC 304 or permission of the department.

**BISC 411-3 Behavioral Ecology Laboratory**

Illustration of the principles of behavioral ecology, and the experimental approach to its study, by means of a series of laboratory and field exercises and an individual project. Prerequisite: BISC 304 and 410. Corequisite: BISC 410 could be taken concurrently.

**BISC 414-3 Limnology**

An integrated examination of biological, chemical and physical processes in lakes and running water ecosystems. Interactions among biological, chemical and physical controls on the structure, function and dynamics of aquatic ecosystems are emphasized. Environmental problems resulting from human disturbances to aquatic ecosystems are examined.

Prerequisite: 75 credit hours in a science program, including BISC 204 or GEOG 215, or permission of the instructor.

**BISC 416-4 Fish Biology**

An introduction to the biology of fishes with an emphasis on classification, evolution, anatomy, physiology, and ecology. Prerequisite: BISC 316 or permission of the department.

**BISC 418-3 Parasitology**

Ecology and phylogeny of animal parasites (from protozoa to helminthes), including those of humans, domestic animals and wildlife. Parasite success, host-parasite interactions, general epidemiological principles of parasitic infections, and reproductive strategies used by parasites to increase the likelihood of transmission as well as host responses and medical options for past and current parasite problems. Prerequisite: BISC 204. Recommended: BISC 300, 306.

**BISC 419-3 Wildlife Biology**

Theoretical and applied aspects of ecology and behavior in relation to wildlife populations and their habitats, with emphasis on important mammals and birds in British Columbia. Attendance on local field trips is required. Prerequisite: BISC 304. Recommended: BISC 316.

**BISC 422-3 Population Genetics**

Theoretical and experimental aspects of inheritance at the population level. Topics include Hardy-Weinberg, one- and two-locus selection theory, introduction to quantitative genetics, and Fisher’s fundamental theorem of natural selection.

Prerequisite: BISC 202 and STAT 201.

**BISC 429-4 Separation Methods in Biology**

A systematic introduction to separation principles and strategies for the purification of biomolecules, with laboratory experiments using contemporary techniques in complex biological systems. Detailed instruction in composing and writing scientific reports.

Prerequisite: 30 credit hours.

**BISC 429W-4 Separation Methods in Biology**

A systematic introduction to separation principles and strategies for the purification of biomolecules, with laboratory experiments using contemporary techniques in complex biological systems. Detailed instruction in composing and writing scientific reports.

Prerequisite: MBB 222, 75 credit hours. Writing.

**BISC 430-3 Plant Pathology**

Fungi, bacteria, viruses, nematodes, parasitic plants and insect vectors as agents of plant disease will be considered. Ecology and ecology of host-parasite relationships will be emphasized via examination of selected economically and/or aesthetically important plant diseases.

Prerequisite: BISC 326 or 337.

**BISC 432-3 Chemical Pesticides and the Environment**

The physical, chemical and biological properties of chemical pesticides: risks and benefits associated with their use in pest management.

Prerequisite: BISC 305 or 366. Recommended: for those who wish entry to the Master of Pest Management program.

**BISC 434-3 Paleoecology and Palynology**

The principles of paleoecological reconstruction, emphasizing the study of pollen grains, spores, and other microfossils in solving problems of paleobiology and earth history. Prerequisite: minimum 60 credit hours including BISC 204, or GEOG 215. Some background in botany, biogeography, or earth sciences is desirable.

**BISC 435-3 Introduction to Pest Management**

Survey of the natures, causes and consequences of pest problems and of the natural and applied factors and processes that determine their occurrence and intensity. Prerequisite: BISC 317, or 75 credit hours.

**BISC 439-4 Industrial Microbiology**

This course introduces students to the use of microorganisms in biotechnology, e.g. in the environmental, pharmaceutical and chemical industries. The lectures will cover the unique physiology/biochemistry of industrial microorganisms and their use in processes such as fermentation, bioremediation, chemical synthesis and protein production. The laboratory component is designed as a series of exercises that form a complete research project. Prerequisite: BISC 303 or equivalent.

**BISC 440-3 Biodiversity**

The production and organization of biodiversity (investigations of species, and an in-depth look at taxonomy, systematics and phylogenetics).

Evolutionary and ecological theories behind the patterns of biodiversity (the current and future geographic distribution of species, and how biodiversity is related to ecosystem function). The values society gives biodiversity (how our values are reflected in law and regulation).

Prerequisite: BISC 300, STAT 201 or equivalent, both with C or better, plus 75 credit hours.

**BISC 440W-3 Biodiversity**

The production and organization of biodiversity (investigations of species, and an in-depth look at taxonomy, systematics and phylogenetics). Evolutionary and ecological theories behind the patterns of biodiversity (the current and future geographic distribution of species, and how biodiversity is related to ecosystem function). The values society gives biodiversity (how our values are reflected in law and regulation).

Prerequisite: BISC 300, STAT 201 or equivalent, both with C or better, plus 75 credit hours. Writing.

**BISC 441-3 Evolution of Health and Disease**

Application of the principles and theories of evolution and ecology to the study of health and disease, with a particular but not exclusive emphasis on humans.

Topics to be covered include the evolutionary ecology of infectious disease, the immune system, cancer, senescence, fetal programming, and the genetic/environmental basis of disease. The course will involve a combination of lectures by the primary faculty member teaching the course, discussions, student research projects (papers, written and revised, and presentations to the class), and specialist guest lectures.

Prerequisite: BISC 202 or 204. Recommended: BISC 300.

**BISC 443-3 Practicum III**

Third semester of work experience in the Biological Sciences Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: BISC 342 and re-admission to the science co-operative education program.

**BISC 444-3 Practicum IV**

Fourth semester of work experience in the Biological Sciences Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: BISC 443 and re-admission to the science co-operative education program.

**BISC 445-3 Environmental Physiology of Animals**

A discussion of the physiological mechanisms and adaptations which permit animals to live in diverse environments. The course will adopt a comparative approach to physiology.

Prerequisite: BISC 305.

**BISC 446-3 Practicum V**

Fifth semester of work experience in the Biological Sciences Co-operative Education Program. Credits for this course do not count towards the credits required for an SFU degree. Prerequisite: BISC 444 and re-admission to the science co-operative education program.

**BISC 449-4 Histological Techniques in Biology**

Principles of microscopy and histological techniques for sample preparation: fixation, dehydration, embedding, and sectioning. Use of lipid and nucleic acid stains and antibodies for labeling.

Prerequisite: BISC 329.

**BISC 455-3 Endocrinology**

A study of endocrine organs and their role in integrating physiological functions in animals.

Prerequisite: BISC 303 or one of BISC 306 or 316.

**BISC 457-3 Plant Molecular Biology and Biotechnology**

An introduction to plant molecular biology and the techniques and applications of plant genetic engineering.

Prerequisite: MBB 221 and MBB 222.
BISC 471-3 Special Topics in Biology
Selected topics not currently offered within the undergraduate course offerings in the department of Biological Sciences. Prerequisite: to be announced.

BISC 472-473-3 Selected Topics in Biology
Selected topics in areas not currently offered within the undergraduate course offerings in the Department of Biological Sciences. Prerequisite: to be announced in the Undergraduate Schedule of Classes and Examinations.

BISC 474-475-3 Special Topics in Biology
Selected topics not currently offered within the undergraduate course offerings in the Department of Biological Sciences. Prerequisite: to be announced in the Course Timetable and Exam Schedule.

BISC 490-5 Research Design
Prerequisite: completion of all lower division biological sciences courses, plus upper division BISC courses appropriate to the subject of the intended research as determined by the departmental undergraduate curriculum committee; completion of all physics, chemistry and mathematics requirements for the major or honors program; at the time of application, students will normally have a CGPA of 3.00 (B standing). BISC 490 may be taken in the semester prior to BISC 491/492 by students intending to complete the three course ISS.

BISC 491-5 Research Technique
Prerequisite: completion of all lower division biological sciences courses, plus upper division BISC courses appropriate to the subject of the intended research as determined by the departmental undergraduate curriculum committee; completion of all physics, chemistry and mathematics requirements for the major or honors program; at the time of application, students will normally have a CGPA of 3.00 (B standing). Corequisite: BISC 490 and 492.

BISC 492-5 Research Reporting
Prerequisite: completion of all lower division biological sciences courses, plus upper division BISC courses appropriate to the subject of the intended research as determined by the departmental undergraduate curriculum committee; completion of all physics, chemistry and mathematics requirements for the major or honors program; at the time of application, students will normally have a CGPA of 3.00 (B standing). Corequisite: BISC 490 and 491.

BISC 492W-5 Research Reporting
Prerequisite: completion of all lower division biological sciences courses, plus upper division BISC courses appropriate to the subject of the intended research as determined by the departmental undergraduate curriculum committee; completion of all physics, chemistry and mathematics requirements for the major or honors program; at the time of application, students will normally have a CGPA of 3.00 (B standing). Corequisite: BISC 490 and 491. Writing.

BISC 497W-3 Undergraduate Research: Writing Intensive
A student may enroll in this course only with prior written agreement of a faculty member to act as research supervisor, who will also provide instruction and feedback on the writing and presentation of results from the research. A maximum of six credit hours in research courses can be applied towards the degree. Prerequisite: 90 credit hours. Writing.

BISC 498-3 Undergraduate Research I
Prerequisite: 90 semester hours. A student will be permitted to enrol in this course only if he/she obtains the prior written agreement of a faculty member to act as research advisor. A different advisor is required than for BISC 498, but a student may take BISC 497W with the same advisor either following or concurrently with BISC 498. A maximum of six credit hours in research courses can be applied towards the degree.

BISC 499-3 Undergraduate Research II
Prerequisite: 90 semester hours. A student will be permitted to enrol in this course only if he/she obtains the prior written agreement of a faculty member to act as research advisor. A different advisor is required than for BISC 498, but a student may take BISC 497W with the same advisor either following or concurrently with BISC 499. A maximum of six credit hours in research courses can be applied towards the degree.

BISC 601-2 Agriculture, Horticulture and Urban Pest Management
A broad range of agricultural pests and their management, with emphasis on insects, crop diseases, and weeds in greenhouses, orchards and field crops. Pest problems in urban environments, including stored products in and near buildings.

BISC 602-2 Forest Pest Management
Management of insect, microbial, vertebrate and plant pests of forests and forest products, including seed orchards, nurseries, dryland sorting areas. Emphasis is placed on diagnosis, decision-making, interactions and techniques for forest pest management.

BISC 603-5 Farm and Specialty Crop Pest Management
Agricultural pests and their management, with emphasis on insects and crop diseases, and including garden and greenhouse pests.

BISC 604-3 Orchard Crop Pest Management
Insects, diseases, and other pests of fruit trees, including grapevines and small fruits, and their management.

BISC 605-3 Management of Animal Disease Vectors
Management of vectors, especially arthropods, of human and animal diseases, especially microbial; selected topics in epidemiology.

BISC 650-3 Environmental Risk Assessment
This course emphasizes recent development in quantitative human health risk assessment and ecological effects based risk assessment of environmental chemicals. Prerequisite: BISC 313.

BISC 651-3 Toxicity Tests I: Ecological Effects Based Tests
This course provides the basic concepts and practical experience for the application of ecologically-based toxicity tests. Prerequisite: BISC 313.

BISC 652-3 ET Tests II: Mammalian Toxicity Tests
The main focus of this course is on laboratory testing procedures currently employed in the toxicological evaluation of chemicals. Prerequisite: BISC 313 or permission of the department.

BISC 654-3 Food and Drug Toxicology
Investigates those toxic compounds in the environment which are added to, contaminate, or supplement one’s diet. Prerequisite: BISC 313 or equivalent.

BISC 655-3 Environmental Toxicology Seminar
A structured series of seminars on the recent developments of environmental toxicology.

BISC 656-6 Master of Environmental Toxicology Program
One semester experience in a university or commercial laboratory according to student’s interests. Prerequisite: acceptance into the environmental toxicology program.

BISC 657-0 Co-Op Practicum I
First work experience for MET students. Prerequisite: permission of the department.

BISC 658-0 Co-op Practicum II
Second work experience for MET students. Prerequisite: Permission of the department.

BISC 800-1 Basic Skills for a Career in Science
Introduction to methods of writing research articles and grant proposals, preparing talks for scientific and non-scientific audiences, and writing for the media. The student-supervisor relationship and conflict resolution are also discussed.

BISC 804-3 Plant Ecology
Directed study and discussion of current literature related to terrestrial plant ecology particularly environmental relationships. Particular topics to be arranged.

BISC 805-3 Comparative Endocrinology
A comprehensive account of morphological and physiological aspects of endocrine systems in various groups of animals. Principles of methods and techniques in endocrinological research.

BISC 806-3 Evolutionary Theory
A consideration of recent advances and current controversies in our understanding of the development, diversification and adaptation of life through natural selection.

BISC 807-3 Ecological and Evolutionary Physiology
This course considers what physiology has to offer behavioral and evolutionary ecology (and vice versa), with a focus on whole organism or ‘integrative physiology.’

BISC 812-3 Marine Research Techniques: Scientific Diving
An introduction to the use of diving in marine/freshwater research, related underwater methodology, diving competency and current issues in marine biological research and scientific diving.

BISC 814-3 Aquatic Ecology
Current problems in the ecology of marine and freshwater environments. Topics will be selected from recent developments in physiological ecology, energetics, population ecology and community studies.

BISC 815-3 Contemporary Problems in Plant Physiology
Directed studies in modern laboratory approaches to specific areas of research.

BISC 816-3 Biology and Management of Insects
Bioinformatics, ecology, economic impact, and management of the major groups of insects, based on intensive reviews of information on representative species. Prerequisite: BISC 317 or permission of the department.

BISC 817-3 Evolution of Social Behavior
Study of the proximate and ultimate causes and consequences of alternative social systems in non-human animals.

BISC 821-1 Cell and Molecular Biology Colloquium
This seminar course provides a rigorous introduction to recent research in cell biology. Papers will be selected along a particular theme, but there is always a strong emphasis on the experimental basis of our knowledge about cellular mechanisms. Prerequisite: permission of the instructor. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including MBB 821, 822, 823.

BISC 822-1 Cell and Molecular Biology Colloquium
This seminar course provides a rigorous introduction to recent research in cell biology. Papers will be selected along a particular theme, but there is always a strong emphasis on the experimental basis of our knowledge about cellular mechanisms. Prerequisite: permission of the instructor. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including MBB 821, 822, 823.
BISC 823-1 Cell and Molecular Biology Colloquium
This seminar course provides a rigorous introduction to recent research in cell biology. Papers will be selected from a particular theme, but there is always a strong emphasis on the experimental basis of our knowledge about cellular mechanisms. Prerequisite: permission of the instructor. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including MB 821, 822, 823.

BISC 824-3 Survival and Reproductive Strategies
An examination of strategies for resource acquisition and allocation, and the behavioral, ecological and life history means whereby organisms maximize lifetime reproductive success.

BISC 827-1 Seminar in Evolutionary and Behavioral Ecology
An introduction to the important issues, methods and philosophy of behavioral ecology, and discussion of current topics. Prerequisite: BISC 304 and 410 or permission of the department.

BISC 828-3 Models in Behavioral Ecology
An intensive survey course of current modeling techniques used for analysis of problems in behavioral ecology.

BISC 829-3 Conservation Ecology
This course will illustrate the value of applying ecological theory, particularly concerning life history and demography, to issues of management and conservation. Examination of life history characteristics and variability of individuals will demonstrate how knowledge of demography and population parameters are essential for effective conservation. Emphasis will be on vertebrate species.

BISC 838-3 Population Biology
Consideration of the ecological and genetic processes acting at the population level.

BISC 839-3 Industrial Microbiology
This course introduces students to the use of micro-organisms in biotechnology, e.g. in the environmental, pharmaceutical and chemical industries. The lectures will cover the unique physiology and biochemistry of industrial micro-organisms as well as discussing their use in various processes including industrial fermentation, bioremediation, chemical synthesis and protein production (e.g. vaccines) by recombinant organisms. Prerequisite: a second or third year undergraduate microbiology course.

BISC 841-3 Plant Disease Development and Control
An examination of the major factors that lead to development of soil-associated and foliar plant diseases in cultivated crops, in relation to the nature, underlying principles, application and limitations of various types of control practices.

BISC 842-3 Molecular Physiology of Insects
An examination of hormonal and nutritional factors that influence growth and development, as well as energy metabolism in insects, with emphasis on the molecular mechanisms involved in their regulation.

BISC 843-3 Applied Behavioral Ecology
Concepts and methods from behavioral ecology and population dynamics are used to solve problems of an applied nature (e.g. pest management, harvesting policies, management of human diseases). Model building and analysis feature prominently.

BISC 844-3 Biological Controls
Principles, theory, and practice of the use of living organisms in the natural regulation and the control of organisms. Emphasis will be on parasitic insects, and include host specificity, genetics, genetic controls, and the evolution of host-parasite associations.

BISC 846-3 Insecticide Chemistry and Toxicology
The chemistry of insecticides, with emphasis on their toxicity, metabolism and molecular mechanism of action.

BISC 847-3 Pest Management in Practice
Status and special problems of research development and implementation of pest management programs in different kinds of ecosystems; consideration of factors such as management systems, economics, communication, legal and social constraints, and ethics in the practice of pest management.

BISC 848-3 Nematology
A study of the concepts of host-parasite relationships as exemplified by nematode parasites of plants and insects. Special problems associated with the nematode organism and its way of life and their relevance to crop production. Prerequisite: permission of the department.

BISC 849-6 Master of Pest Management Thesis
An independent research thesis based on laboratory or field-based research and focused on some aspect of pest management. The research may be supervised by any faculty member in the Department of Biological Sciences.

BISC 850-3 Weed Biology and Control
A survey of the biological and ecological characteristics of weeds, the types and magnitudes of damage they cause, and the theory and principles of control.

BISC 851-3 Vertebrate Pests
Evaluation of the biology of vertebrates that are in conflict with human activities; discussion of control strategies and economic and social impacts.

BISC 852-3 Biology of Animal Disease Vectors
Physiological, molecular, and behavioural interactions between parasites of human importance and their insect vectors. Emphasis is placed on current literature relating to modern approaches in reducing parasite transmission.

BISC 854-3 Ecotoxicology
The proposed course will detail the physicochemical factors that influence contaminant behavior in aquatic and terrestrial ecosystems. Prerequisite: BISC 101, 312, CHEM 102, and 103. Recommended: BISC 414.

BISC 856-3 Industrial Biotechnology
This course is intended to provide students with the theory and hands-on experience of several commonly used biotechnological techniques. Prerequisite: BISC 221 and 303. Recommended: BISC 329.

BISC 859-3 Special Topics I
Selected topics in biological science. The content of this course varies from semester to semester.

BISC 869-3 Special Topics II
Special Topics II

BISC 879-3 Special Topics III
Special Topics III

BISC 880-3 Special Topics in Behavioral Ecology
A consideration of advanced special topics in the field of behavioral ecology.

BISC 881-3 Special Topics in Cell and Molecular Biology
A student participation seminar course focusing on recent literature on selected topics in cellular, developmental, and molecular biology. Prerequisite: permission of the instructor.

BISC 882-3 Special Topics in Environmental Toxicology
Special topics course with emphasis on recent developments in environmental toxicology.

BISC 883-3 Special Topics in Pest Ecology and Management
A course that provides graduate students with an in-depth analysis of a topic in pest ecology and management. The course content will change from year to year to reflect student interests and topical research, and can be taught by any faculty member of the Department of Biological Sciences.

BISC 885-3 Special Topics in Animal Physiology
Special topics in comparative vertebrate and invertebrate functional mechanisms and adaptations. Prerequisite: undergraduate course in animal physiology.

BISC 886-3 Special Topics in Marine and Aquatic Biology
Special topics course emphasizing recent developments in the area of aquatic and marine biology.

BISC 887-3 Special Topics in Plant Biology
Advanced treatment of selected topics or specialized areas in plant biology. The special topics to be discussed will vary from semester to semester.

BISC 888-1 Directed Readings in Biology
Programs of directed readings and critical discussions offered by staff members to individual students. A formal description of the study program is required (forms available from the graduate secretary). These forms must be approved by the departmental graduate studies committee at the beginning of the semester, prior to registration.

BISC 889-2 Directed Readings in Biology
Intended to cover the same ground as a normal graduate course, it may be given to one or two students when a lecture/seminar is inappropriate.

BISC 890-3 Directed Readings in Biology
Programs of directed readings and critical discussions offered by staff members to individual students. A formal description of the study program is required (forms available from the graduate secretary). These forms must be approved by the departmental graduate studies committee at the beginning of the semester, prior to registration.

BISC 898-6 MSc Thesis
BISC 899-6 PhD Thesis

Business Administration BUS
Faculty of Business Administration

BUS 130-3 Business in the Networked Economy I
The management and operation of business, including the principles, concepts, ideas and tools used by managers. Management in the contemporary world of high technology is emphasized, featuring examples and cases involving high-tech firms. In addition, the course exposes students to international and local business issues, and to large companies as well as to smaller, entrepreneurial firms. Students with credit for TECH 128, 129 and 130 may not take this course for further credit. Breadth-Social Sciences

BUS 207-3 Managerial Economics
Emphasis is upon the relevance of economic models to business decision-making and, in particular, upon the rational analysis of choice alternatives within the firm. Course will include consideration of optimizing techniques and analysis of risk, demand, production and profit in addition to examination of long-term investment decisions and business forecasting.

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Prerequisite: ECON 103, 105, MATH 157; 15 credit hours. Students with credit for ECON 301 or BUS 307 may not take BUS 207 for further credit. Quantitative.

BUS 225-3 Co-op Practicum I
This is the first semester of work experience for students in the Co-operative Education Program. It provides an opportunity to integrate theory and practice. This course is open only to co-op students. The co-op program co-ordinator must be contacted at the beginning of the semester prior to registration for this course. Credits for this course do not count towards the credits required for an SFU degree.

BUS 237-3 Introduction to Computers and Information Systems in Business
Provides hands on training in workplace software such as Excel and Access, explains computer, network and system technologies, and demonstrates how information systems are used by organizations to improve efficiency and effectiveness and create competitive advantage. Assumes no prior computing or technical knowledge. Prerequisite: 12 credit hours. Students may not receive credit for both BUS 237 and 337.

BUS 242-3 Introduction to Financial Management
This course is designed to introduce students to the concepts and techniques of corporate financial analysis. The goal is to provide them with the skills and understanding necessary to apply financial tools in a work-related context. Three primary financial functions are considered: management of working capital, the investment decision, and funds acquisition. The course also covers issues from financial accounting related to the development of financial statements and financial statement analysis. Prerequisite: MATH 110. Special Instructions: this course is only open for credit to students in the integrated studies program within the bachelor of general studies degree.

BUS 251-3 Financial Accounting I
An introduction to financial accounting, including accounting terminology, understanding financial statements, analysis of a business entity using financial statements. Includes also time value of money and a critical review of the conventional accounting system. Prerequisite: 12 credit hours. Quantitative.

BUS 254-3 Managerial Accounting I
Theory and methods of cost compilation for managerial planning, control and decision making; the use of budgets and analysis in planning and controlling operations, establishing supervisory and departmental responsibility, and various techniques of measuring results. Prerequisite: BUS 251; 15 credit hours. Students with credit for BUS 324 or 328 may not take BUS 254 for further credit. Quantitative.

BUS 272-3 Behavior in Organizations
Theories, concepts and issues in the field of organizational behavior with an emphasis on individual and team processes. Core topics include employee motivation and performance, stress management, communication, work perceptions and attitudes, decision-making, team dynamics, employee involvement and conflict management. Prerequisite: 12 credit hours.

BUS 303-3 Business, Society and Ethics
This course examines and reviews contemporary thinking on the changing role of business and business persons in the operations of society, particularly Canadian society. The course explores the changing legal, ethical and regulatory environments of business focusing on the critical alignment of values, management, communication, work perceptions and attitudes, decision-making, team dynamics, employee involvement and conflict management. Prerequisite: 60 credit hours.

BUS 312-4 Introduction to Finance
Role and function of financial managers, financial analysis, compound interest valuation and capital budgeting, management of current assets, introduction to financial institutions and financial reporting. Prerequisite: BUS 254 (or 324); 60 credit hours. Recommended: BUS 207 or ECON 301. Quantitative.

BUS 314-3 New Venture Finance
Start-up and early-stage ventures have particular financial challenges associated with the uncertain and untested nature of the businesses. This course analyzes how entrepreneurs and their financial backers can spot, create and manage value. Topics covered include opportunity recognition, cash flow forecasting, valuation methodologies, financial contracts, and careful negotiations. Various sources are considered for start-up capital (private debt, angel financiers, venture capitalists, development banks), and different strategies are considered for harvesting or exiting (initial public offerings, merger, acquisition, leveraged buy-out, shut down) a venture. Prerequisite: BUS 312, 60 credits.

BUS 315-4 Investments
Investment from an individual and institutional point of view. Topics include: bond valuation and the term structure of interest rates, stock valuation, portfolio theory, asset pricing models, efficient markets and portfolio performance evaluation. Prerequisite: BUS 312, 336 and 207 or ECON 301; 60 credit hours. Quantitative.

BUS 316-3 Derivative Securities
The role derivative securities, mainly options and futures contracts, in controlling risk and enhancing profit opportunities. Valuation of derivative securities. The organization of options and futures markets and the mechanics of trading. Prerequisite: BUS 312, 336; 60 credit hours. Students with credit for BUS 416 may not take BUS 316 for further credit. Quantitative.

BUS 319-3 Integrative Financial and Managerial Accounting
For students planning further course work in accounting. Its integrative approach includes financial and managerial accounting topics, alternative accounting models, accounting systems and accounting data management, international accounting and accounting ethics. Prerequisite: BUS 254 (or 324 or 328), 237 and 60 credit hours. Students with credit for BUS 252 may not take BUS 319 for further credit. Corequisite: BUS 254 can be taken concurrently with BUS 319.

BUS 320-3 Financial Accounting: Assets
In-depth coverage of the accounting methods, problems and limitations associated with assets. Alternative valuation bases will be emphasized and illustrated together with the impact on income. Integration of theory and practice in relation to the treatment of assets. Prerequisite: BUS 254; 60 credit hours. Quantitative.

BUS 321-3 Financial Accounting: Equities
In-depth coverage of accounting, methods, problems, and limitations, associated with liabilities and owners’ equity. An introduction to the unique aspects and issues of accounting for not-for-profit organizations will also be provided. Prerequisite: BUS 320-3; 60 credit hours. Quantitative.

BUS 322-3 Intermediate Managerial Accounting
In-depth coverage of important managerial accounting topics introduced in BUS 254 (e.g., transfer pricing, variance analysis) and more advanced topics (e.g., decision making under uncertainty, the value of information), focusing on providing the tools and techniques needed for the generation, analysis and dissemination of management accounting information necessary for making strategic business decisions. The course will also introduce and develop the case approach in order to prepare students for BUS 424. Prerequisite: BUS 254, 60 credit hours.

BUS 325-3 Co-op Practicum II
This is the second semester of work experience for students in the Co-operative Education Program. It provides an opportunity to integrate theory and practice. This course is open only to co-op students. The co-op program co-ordinator must be contacted at the beginning of the semester prior to registration for this course. Credits for this course do not count towards the credits required for an SFU degree.

BUS 326-3 Co-op Practicum III
This is the third semester of work experience for students in the Co-operative Education Program. It provides an opportunity to integrate theory and practice. This course is open only to co-op students. The co-op program co-ordinator must be contacted at the beginning of the semester prior to registration for this course. Credits for this course do not count towards the credits required for an SFU degree.

BUS 327-3 Co-op Practicum IV
This is the fourth semester of work experience for students in the Co-operative Education Program. It provides an opportunity to integrate theory and practice. This course is open only to co-op students. The co-op program co-ordinator must be contacted at the beginning of the semester prior to registration for this course. Credits for this course do not count towards the credits required for an SFU degree.

BUS 329-4 Income Tax for Business Decision-Making
An examination of the underlying principles, concepts and methodology of income taxation in Canada, with emphasis upon the use of current reference sources. The course focus will be upon business taxation. Prerequisite: 60 credit hours. Corequisite: BUS 320 or permission of Faculty.

BUS 336-4 Data and Decisions II
This course is an extension of BUEC 232. It develops and applies the quantitative models that are most directly relevant to business decisions. Beginning with material on multiple regression and forecasting models, the course moves on to decision analysis, business simulation, quality control, and an introduction to optimization. Prerequisites: MATH 157 and BUEC 232, 60 credit hours. Quantitative.

BUS 338-3 Managing Technological Innovation
An introduction to the theory and practice of the management of technological innovation. The external environment for technological innovation is examined through investigation of national and regional systems of innovation. The internal firm capabilities for creating and sustaining innovative firms are explored in detail, from the creation of ideas through to the commercialization of new products and services. Proficiency is gained in identifying sources of innovative value, implementing processes to capture it, and creating strategies for commercialization. Prerequisite: 60 credit hours.

BUS 341-3 Fundamentals of Marketing for Integrated Studies Program
This course is intended to be a first course in marketing management. Its purpose is to present students with the fundamentals of the marketing management process and of the importance of marketing in general. You will also develop some insight into the complex area of marketing decision-making and what marketing managers need to know to be effective. By applying fundamental marketing concepts, students will be able to solve real life marketing problems. Particular emphasis will be placed on understanding the models and market segmentation analysis, the management of promotion, product-related decision-making and market distribution. Uncontrollable environmental
elements pertinent to marketing planning will also be discussed. Prerequisite: 60 credit hours. This course is only open for credit to students in the Integrated Studies Program within the bachelor of general studies degree.

BUS 342-3 Foundations of Entrepreneurship
Provides an overview of entrepreneurship, where opportunities come from, and where they may be found. Prerequisite: 60 credit hours; students with credit for BUS 359-3 Selected Topics (Introduction to Entrepreneurship) may not take this course for further credit.

BUS 343-3 Introduction to Marketing
The environment of marketing; relation of social sciences to marketing; evaluation of marketing theory and research; assessment of demand, consumer behavior analysis; market institutions; method and mechanics of distribution in domestic, foreign and overseas markets; sales organization; advertising; new product development, publicity and promotion; marketing programs. Prerequisite: 60 credit hours.

BUS 344-3 Business to Business Marketing
This course deals with the marketing of products and services to industrial and other non-consumer sector buyers. The student will be expected to apply previously acquired marketing skills to purchasing situations which arise between organizations. Due to the nature of manufacturing activity in this province, industrial marketing will be approached from a resource industry based standpoint where discussions permit. Prerequisite: BUS 343; 60 credit hours.

BUS 346-3 International Business
Study of international environment and its impact on business behavior: cultural, social, economic and institutional factors; major functions of international business; export and import trade, foreign investment, production and marketing operations; theoretical principles, government policies, business practices. Prerequisite: 60 credit hours.

BUS 347-3 Consumer Behavior
A study of the manner in which decisions are made in the market place, by both the ultimate consumer and the industrial buyer. Course will include consideration of consumer decision processes, individual and group influences and special cases such as brand loyalty and consumerism. Prerequisite: BUS 343; 60 credit hours.

BUS 360-4 Business Communication
This course is designed to assist students to improve their written and oral communication skills in business settings. The theory and practice of business communication will be presented. Topics include analysis of communication problems, message character, message monitoring, message media. Exercises in individual and group messages and presentations will be conducted. Prerequisite: 60 credit hours.

BUS 360W-4 Business Communication
This course is designed to assist students to improve their written and oral communication skills in business settings. The theory and practice of business communication will be presented. Topics include analysis of communication problems, message character, message monitoring, message media. Exercises in individual and group messages and presentations will be conducted. Prerequisite: 60 credit hours. Writing.

BUS 361-3 Professional Management
Introduction to the hard and soft skills of project management. Management software and techniques such as work breakdown, estimation, budgeting and status reporting are used. Applies structured processes and develops team-based skills and knowledge. Assumes no prior computing or technical knowledge. Prerequisite: 60 credit hours.

BUS 362-4 Business Process Analysis and Systems Design
Roles, processes, systems, techniques and tools for analyzing business process, creating alternatives and developing solutions. Students analyze and demonstrate an understanding of a core process of a local business and propose a new or evolved system. Prerequisite: BUS 237; 60 credit hours.

BUS 364-3 Information Systems in Organizations and Society
This course is directed at the student as a consumer and a manager of systems within organizations, and as a member of society. We will discuss the use of information technology in the functional areas of business as a method of control as well as its implication in improving efficiency and effectiveness within organizations. The student will be encouraged to form his/her own opinions about this very pervasive technology. Prerequisite: BUS 237; 60 credit hours.

BUS 374-3 Organization Theory
This course will examine theories of organization which use the organization as a basic unit of analysis. It will show how the structure and internal processes of an organization are linked to and partially determined by forces in the external environment of the organization. Theoretical factors such as the technology and corporate strategy of the organization will also be examined. Prerequisite: 60 credit hours; BUS 272 (or 372).

BUS 380-3 Comparative Management
This course examines the major similarities and differences in management systems and practices in a variety of countries, including western Europe, East Asia, Middle East, and Latin America. Topics include the following: comparative management frameworks, managing cultural differences, cross-cultural business negotiations, and international human resource management. Prerequisite: BUS 272; 60 credit hours. Students with credit for BUS 430 may not take BUS 380 for further credit. Recommended: BUS 346.

BUS 381-3 Introduction to Human Resource Management
Subjects include human resource planning, job analysis and design, recruitment, employment equity, selection and placement, performance appraisal, compensation and benefits, training and development, occupational health and safety, and industrial relations. Prerequisite: BUS 343 or 346; 60 credit hours. BUS 274 is a prerequisite for this course.

BUS 394-3 Selected Topics in Business Administration
The subject matter will vary from semester to semester depending upon the interest of faculty and students. Prerequisite: permission of the Faculty; 60 credit hours.

BUS 395-3 Selected Topics in Business Administration
The subject matter will vary from semester to semester depending upon the interest of faculty and students. Prerequisite: permission of the Faculty; 60 credit hours.

BUS 403-3 Seminar in Business and Society
Advanced topics in business and society. Specific emphasis may vary and may include the evolution of the business system in Canada, foreign investment and its impact, consumerism, environmental protection, business ideologies, etc. Prerequisite: 90 credit hours, BUS 360.

BUS 410-3 Financial Institutions
An examination of financial institutions and the markets in which they operate. Topics may include: institutional structure, financial contract forms, valuation and pricing relationships, intermediation, financial transacting, the regulatory environment, risk measurement and hedging strategies. Prerequisite: BUS 315, 316, 360; 60 credit hours.

BUS 413-4 Corporate Finance
Corporate decisions in the context of financial markets. Topics include: real asset investments, financing alternatives, dividend policy, working capital management, and corporate securities valuation. Prerequisite: BUS 315, 316, 360; 60 credit hours.

BUS 417-4 Security Analysis
This course covers the historical, theoretical and practical issues involved in the market valuation of securities. Three general areas are studied: valuation of fixed income securities; valuation of equity securities; and topics in portfolio management. Prerequisite: BUS 315, 316, 360; 60 credit hours.

BUS 418-3 International Financial Management
An introduction to international financial markets and institutions and to the management of assets and liabilities in an international/multinational setting. Topics to be covered include: exchange rate determination and management of foreign exchange risk; interest rate swaps; international portfolio management; comparative markets; and country risk. Prerequisites: BUS 315, 316, 360; 60 credit hours.

BUS 419-3 Advanced Derivative Securities
This is a second course in derivative securities. Topics may include: extensions of the Black-Scholes model, pricing of American options, interest rate derivatives, complex derivatives and real options. Prerequisite: BUS 315, 316, 360; 60 credit hours. Students who have taken BUS 493 under the topic Security Analysis may not take BUS 417 for further credit.

BUS 420-3 Advanced Accounting
In-depth coverage of financial accounting topics, specifically issues relating to business combinations and foreign currency. Consideration is also given to the interpretation and analysis of financial statements. Prerequisites: BUS 321, 360; 60 credit hours.

BUS 421-3 Accounting Theory
Consideration of methods by which accounting theory is developed and examination of specific models including historical costs, replacement costs, resale price and price level adjustment models. Prerequisites: BUS 321, 360, BUS 207 or ECON 301; 60 credit hours.

BUS 424-3 Advanced Managerial Accounting
Process costing; joint and by-product costing; inventory planning and control; cost accounting and statistical methods, relationship to operations research. Prerequisites: BUS 322 or 319, 336, 360; 60 credit hours.

BUS 425-3 Co-Op Practicum V
This is the fifth semester of work experience for students in the accounting Co-operative Education Program. It provides an opportunity to integrate theory and practice. This course is open only to accounting co-op students. The co-op program co-ordinator must be contacted at the beginning of the semester prior to registration for this course. Credits for this course do not count towards the credits required for an SFU degree.
BUS 443-3 Marketing for New Ventures
Understand how to develop and launch new products that will be successful with customers. Students will learn to: identify product/service opportunities; generate and evaluate concepts; develop concepts into products; launch new products. Prerequisite: 60 credits; BUS 360, 343.

BUS 445-3 Analysis of Data for Management
The analysis and interpretation of data, particularly multivariate data. This course is complementary to BUS 442 but may be taken independently. Applications in management science and information systems, organizational behavior and other areas as well as in marketing will be examined. Prerequisite: BUS 343, 336; 60 credit hours.

BUS 446-4 Marketing Strategy
Marketing strategy focuses on the analysis of market problems and opportunities and the development of appropriate strategies. Topics include: analytical techniques, strategic planning methods and managerial problems of planning. Case analysis and problem solving will be the major orientation of the course. Prerequisite: BUS 312, 347, 360; 60 credit hours.

BUS 447-3 Global Marketing Management
The marketing of goods and services in an international context, with emphasis on Pacific Rim countries. Theoretical concepts, environmental influences. Research and forecasting international markets. The management of international marketing. Prerequisite: BUS 343, 360; 60 credit hours. Recommended: BUS 346.

BUS 448-4 Integrated Marketing Communications
An integrative approach to the study of promotion including advertising publicity, personal selling and sales promotion; evaluation of the role promotion has in marketing and the economy; formulation and analysis of promotional goals, planning, organizing and controlling; utilization of market research studies; forecasting, budgeting, media selection; promotion institutions. Prerequisite: BUS 347, 360; 60 credit hours.

BUS 449-3 Ethical Issues in Marketing
A critical examination of topics such as consumerism, marketing ethics, and social responsibility, efficiency of marketing or ecological marketing. The particular emphasis may vary depending on the interests of the class and instructor. Prerequisite: BUS 343, 360; 60 credit hours.

BUS 451-8 Project in International Marketing
Addresses a key international marketing issue facing a Norwegian or other European firm with interests in or expansion plans for North America. These firms will be identified by our partner institution, BI Norwegian School of Management, in consultation with prospective students. Prerequisite: 80 credit hours; four 400-level marketing courses. This course is available only to students from the BI Norwegian School of Management who are on an exchange at SFU under the special program agreement.

BUS 456-4 Honors Seminar II
One of a cohort of three courses presented at the Segal Graduate School of Business for senior students enrolled in the undergraduate program in Business Administration. This course is part of a 12-credit seminar program fulfilling the requirements of the “Honors” portion of the degree requirements. Each full-time one semester program emphasizes current issues in business and society, industry interaction, and dialogue and discussion as conduits for student centered learning. Prerequisite: 105 credit hours, 3.5 CGPA, or permission of the faculty. Corequisite: BUS 456, 458.

BUS 458-4 Honors Seminar III
One of a cohort of three courses presented at the Segal Graduate School of Business for senior students enrolled in the undergraduate program in Business Administration. This course is part of a 12-credit seminar program fulfilling the requirements of the “Honors” portion of the degree requirements. Each full-time one semester program emphasizes current issues in business and society, industry interaction, and dialogue and discussion as conduits for student centered learning. Prerequisite: 105 credit hours, 3.5 CGPA, or permission of the faculty. Corequisite: BUS 456, 458.

BUS 459-3 Services Marketing
Increases students’ sensitivity to the marketing concepts previously studied as applied to service industries, and familiarizes students with the management problems of service marketing managers. Prerequisite: 60 credits; BUS 343, 347 and 360. Students who have taken BUS 490-495 under the same topic may not take this course for further credit.

BUS 462-4 Management Support Systems
Builds on the analysis and statistical skills developed in other courses to help students become a ‘power user’ of data and technology. Students will learn to: identify product/service opportunities; launch new products. Prerequisite: BUS 343, 336; 60 credit hours. Corequisite: BUS 336 can be taken concurrently.

BUS 463-3 Management Issues in Information Systems
Introduces the theory and frameworks used to analyze decisions about management issues such as which system to buy or build, outsourcing, and overcoming user resistance to new systems. Prerequisite: BUS 237, 360; 90 credit hours. Recommended: BUS 362.

BUS 472-3 Seminar in Organizational Behavior
Advanced topics in organizational behavior. Specific emphasis may vary depending on special interest of faculty. However, general content will extend basic theories and problem descriptions covered in BUS 272 and 374 and will include advanced organizational theory and special topics in personnel. Prerequisite: BUS 272 (or 372) or BUS 374; 60 credit hours.
BUS 473-4 Operations Management
The management of operating systems including allocation and scheduling of resources; control of costs, inventories, quality, and manpower; design of operating systems including location, layout and manpower; establishment of work methods and standards. Prerequisite: BUS 336, 360; 60 credit hours.

BUS 474-3 Supply Chain Management
Exploration of the entire network of companies that work to distribute, service and recycle their goods and services to customers. Efficient flow of information, material and finances along the entire chain allows firms to collaborate in a manner that benefits both corporations and customers. Analysis of the broader supply chain enables improvements in procurement, customer response time, risk sharing, on-time delivery, inventory levels, and transportation and global logistics. Prerequisite: 60 credits; BUS 360 and 336. Students who have taken BUS 490-495 under this topic may not take this course for further credit.

BUS 477-4 New Venture Planning
Emphasis will vary but may include in any given semester consideration of small business in the Canadian economy, career comparisons in small and large businesses, evaluation of new ventures, organization, capitalization, planning, marketing and financial management. Prerequisite: BUS 312, 343, 360; 90 credit hours.

BUS 478-3 Seminar in Administrative Policy
Integration of the various areas of business for the purpose of analyzing and recommending strategies for planning and decision-making within the firm and a defined environment. Prerequisite: BUS 207, 312, 334, 360 and either BUS 374 or 381; 90 credit hours.

BUS 480-3 Negotiation/Conflict Resolution for Integrated Studies Programs
Overall, the course will be a combination of theory, discussion, instructor demonstration, skill practice in large and small groups and small group practice of the four-stage negotiation/conflict resolution model/process. The students in this course will learn about and be able to discuss interest-based negotiation and conflict resolution theory, strategize and plan for various negotiations and conflict situations and be able to put into practice a practical, efficient and productive process for negotiating agreements and resolving conflict. Prerequisite: BUS 360; 60 credit hours. This course is only open for credit to students in the Integrated Studies Program within the bachelor of general studies degree.

BUS 481-3 Recruitment and Selection
Design and administration of recruiting and selections mechanisms. Analysis of procedures and skills that are used to translate strategic objectives into staffing decisions. How these mechanisms are affected by internal and external factors such as person-organization fit, labour markets, government legislation and technology. Prerequisite: BUS 381 and 360; 60 credit hours.

BUS 482-3 Performance Management
The design and implementation of performance management systems. How these systems articulate organizational mission, strategy and goals, provide organizational and individual standards, and integrate systems and procedures within the context of organizational culture and practices. Prerequisite: 60 credit hours; BUS 272, 381 and 360.

BUS 484-3 Employment Systems
Examination of the day-to-day administration of various employment systems in both unionized and non-unionized settings. Employment systems have implications for how conflicts between employee and employer interests are resolved, for the attainment of due process in the workplace, and for the flexibility and efficiency of work organization. Characteristics and outcomes of various employment systems will be examined. Prerequisite: 60 credit hours; BUS 381 and 360.

BUS 486-3 Leadership
Addresses theoretical foundation and research associated with leadership, including a critical assessment of what leaders do. Issues such as gender and leadership, leadership ethics, and culture and leadership will be examined. Prerequisite: 60 credits; BUS 272, 360. Students who have taken BUS 490-495 under this topic may not take this course for further credit.

BUS 487-3 Organizational Development and Change Management
Theories and methods of planned change in organizations with an emphasis on the psychological, cultural and structural issues of implementing change. Prerequisite: BUS 360, 60 credit hours, BUS 374 or 381.

BUS 488-3 Group Dynamics and Teamwork
Interpersonal and group behavior in organizational contexts, including group development, team building, interpersonal communications, intergroup conflict, group problem-solving and decision-making. Prerequisite: BUS 360, 60 credit hours, BUS 374 or 381.

BUS 490-491-3 Selected Topics in Business Administration
The subject matter will vary from semester to semester depending upon the interests of faculty and students. Prerequisite: as stated by the faculty at the time of offering; 60 credit hours. This course is only open for credit to students in the Integrated Studies Program within the Bachelor of General Studies degree completion program.

BUS 492-495-3 Selected Topics in Business Administration
The subject matter will vary from semester to semester depending upon the interests of faculty and students. Prerequisite: permission of the faculty; 60 credit hours.

BUS 496-5 Selected Topics in Business Administration
The subject matter will vary from semester to semester depending upon the interests of faculty and students. Prerequisite: permission of the faculty; 60 credit hours.

BUS 498-3 Directed Studies
Independent reading and research on topics selected in consultation with the supervising instructor. Prerequisite: permission of the faculty; 60 credit hours.

BUS 499-5 Directed Studies
An independent and independent reading and research course on topics selected in consultation with the supervising instructor. Prerequisite: as stated by the faculty at the time of offering; 60 credit hours.

BUS 507-3 Financial Accounting
Prerequisite: introductory statistics, computing, calculus or permission of the instructor.

BUS 527-3 Financial Accounting
Prerequisite: introductory statistics, computing, calculus or permission of the instructor.

BUS 528-3 Managerial Accounting
Prerequisite: BUS 527 or equivalent course.

BUS 536-4 Quantitative Methods in Management
The objective of this course is to supply prospective managers with the skills necessary to make effective use of formal quantitative analyses, whether those analyses are performed by themselves or by a technical specialist. The course is intended for students with diffuse interests and diverse backgrounds who nevertheless have a common objective of enhancing their abilities to confront complex management decisions in a practical fashion. Prerequisite: introductory statistics/computing/mathematics, or permission of the instructor.

BUS 543-4 Introductory Graduate Marketing
The marketing of products and related services to business and other non-consumer sector buyers. Prerequisite: introductory statistics/computing/mathematics, or permission of the instructor.

BUS 550-2 Financial Accounting
Prerequisite: BUS 550 or equivalent.

BUS 552-4 Managerial Economics
Prerequisite: BUS 550 or equivalent.

BUS 553-2 Quantitative Business Methods
The use of quantitative or statistical techniques in managerial decision making.

BUS 554-2 Management Information Systems
The design and implementation of information systems to provide appropriate and timely information to management.

BUS 555-4 Managerial Finance
An overview of investment and financing decisions of the firm, including valuation, capital expenditures, financial markets, dividend and financial policy. Prerequisite: BUS 550 and 553 or equivalent.

BUS 556-4 Marketing Management
An introduction to the application of pricing, promotion, channel selection and product planning to marketing decisions.

BUS 557-4 Human Relations Management/Organization Behavior
Issues in the behavior of people in organizations, and human resource management practices that influence employee behavior.

BUS 558-3 Special Topics
Prerequisite: requires prior permission of the instructor.

BUS 559-4 Special Topics
Prerequisite: requires prior permission of the instructor.

BUS 561-562-2 Special Topics
Prerequisite: requires prior permission of the instructor.

BUS 572-4 Organizations and Human Resource Management
This course introduces students to theories of organizational behavior and organization theory. The student will be expected to develop an understanding of issues in the management of people and work and the design and functioning of organizations. The course will cover concepts of motivation, leadership,
decision-making, power and politics, structure, environments and organizational effectiveness. The course will also introduce students to the major professional fields in organizational behavior, industrial/organizational psychology, personnel, and organizational development. Prerequisite: introductory statistics/computing/mathematics, or permission of the instructor.

BUS 578-4 Strategic Management
The course focuses on the managerial tasks of developing and implementing organizational strategy and the processes involved. Prerequisite: BUS 507, 527, 536, 543.

BUS 601-2 Data and Decision-Making
This course explores the application of quantitative methods to managerial decision-making. Topics will include data analysis and statistical description, sampling and statistical inference, and regression analysis. Case studies are used to help managers cope with decision-making in complex and uncertain circumstances.

BUS 602-4 The Global Business Environment
This course will examine the international context of business. Fundamental concepts in international finance, economics and business will be introduced and significant trends in the world economy will be analysed. Topics might include global trends in monetary and fiscal policy, exchange rate analysis, trends in international trade and investment, analysis of emerging markets, and strategic alliances. The human, cultural and ethical issues arising from doing business abroad will be discussed.

BUS 603-4 Structure and Change in Organizations
This course applies contemporary organizational theory to the managerial challenges of entrepreneurial, corporate, public sector and not-for-profit organizations in the areas of organizational structure and change, adapting the organizations to their changing environment, and articulating alternate plans for organizational survival (and where possible, growth).

BUS 604-4 Organizational Change and Development
An examination of the concepts, principles and assumptions of organizational development.

BUS 606-4 Financial Management
Finance is the study of investments; these investments are made by firms in their operative activities and by persons in their financial portfolios.

BUS 607-4 Business Strategy
Analysis of strategic issues affecting the success of the total enterprise and business units. The course includes industry analysis, internal analysis of the firm's skills, resources and capabilities, corporate and business level strategies, the process of doing strategic analysis, the relationship between strategy and management, and the basic design of a plan of implementation for a strategic plan.

BUS 610-2 Directed Studies in Business Administration
Individual study with a faculty member. The course outline must be approved by the graduate program committee.

BUS 611-612-4 Directed Studies in Business Administration
Individual study with a faculty member. The course outline must be approved by the graduate program committee.

BUS 615-4 Marketing Management
An analysis of the strategic consideration of marketing management and their impact on the firm and its competitors.

BUS 621-4 Information Technology and Organizational Transformation
A seminar format will be used to discuss the concepts and frameworks essential to the effective management of IT in organizations. Our focus will be on the strategic role that information systems play in organizations, their structure and components, and various perspectives on how to plan and manage this technology.

BUS 632-2 Operations Research
Quantitative methods to cope with problems of complexity, uncertainty, and lack of information in organizational decision-making.

BUS 651-4 Managerial Economics
The application of modern microeconomic theory to problems of managerial decision-making. The importance of both economic models and quantitative applications are explained. Topics include demand, cost and productivity analysis; the analysis of market structure and firm strategy, international competition and trade; organizational economics; and the analysis of risk, uncertainty and information.

BUS 652-655-2 Special Topics in Business Administration
Course content varies from semester to semester. Specific course outlines must receive prior approval of the graduate program committee.

BUS 660-663-4 Special Topics in Business Administration
Course content varies from semester to semester. Specific course outlines and bibliographies must receive prior approval of the graduate program committee.

BUS 670-4 Financial and Managerial Accounting
Analysis of financial statements and their role in organizational life. Development of perceptual and communication skills in small groups. Leadership theory and work group behavior.

BUS 681-4 Organizational Leadership and Interpersonal Behavior
Interpersonal relations and group dynamics in organizational life. Development of perceptual and communication skills in small groups. Leadership theory and work group behavior.

BUS 688-4 Industrial Relations
Collective bargaining, the collective agreement, work stoppages, arbitration and the legal environments.

BUS 689-4 Special Topics in Business Administration
Course content varies from semester to semester. Specific course outlines and bibliographies must receive prior approval of the graduate program committee.

BUS 691-4 Business and Government
This course provides a survey of the relationship between business and government. The course examines the rationale for and nature of government intervention, the impact of public policies on business and the interactions among government, business and society.

BUS 696-6 Applied Project
Students will undertake a strategic firm analysis or public policy analysis (public sector students). Students may undertake other types of projects with permission of the executive MBA director. The project is submitted to the library. Prerequisite: BUS 607, 691.

BUS 698-4 Directed Studies in Business Administration
Individual study with a faculty member. The course outline must be approved by the graduate program committee.

BUS 701-2 Strategy
Strategic management requires a dynamically oriented analysis of markets, industries and the companies within those industries. The goal of strategic management is to proactively develop strategies to create and sustain competitive advantage. Participants will gain an understanding of what strategy is, how it is constrained, formulated, developed and implemented.

BUS 702-3 Marketing Management
An introduction to the application of pricing, promotion, channel selection and product planning to marketing decisions. The strategic consideration of marketing management and its impact on the firm will be discussed.

BUS 703-3 Managerial Economics
Applications of economic theory to business problems. The importance of economic models and quantitative applications will be explained. Topics include demand, cost and productivity analysis; the analysis of market structure and firm strategy; and the analysis of risk, uncertainty and information.

BUS 704-3 Leadership and Team Building
Using laboratory education methods, this course will provide students with personalized feedback and coaching on interpersonal skills. Skills like leadership, coaching, team building, persuading, negotiating and managing conflict will be refined. Students will also be exposed to methods in observing and influencing group processes.

BUS 705-3 Financial/Managerial Accounting

BUS 706-2 Data and Decisions
The use of quantitative or statistical techniques in managerial decision-making.

BUS 707-2 Ethical Decision Making
An examination and review of contemporary thinking on the changing role of business and business persons in the operations of society. The course explores the changing legal, ethical, and regulatory environments of business focusing on the critical alignments of values, policies, technology and legal approaches between the modern organization and its broader public.

BUS 708-3 Finance
An overview of investment and financing decisions of the firm, including valuation, capital expenditures, financial markets, dividend and financial policy. Prerequisite: 705.

BUS 709-3 Managing Information
This course will introduce students to the theories and practices concerning the effective use of the application of Information Technology (IT) in organizations. Skills in analysing complex situations in a holistic manner will be reinforced through the use of case methods. Technical aspects of information technology will be discussed.

BUS 710-3 Emerging Markets
This course focuses on managerial challenges facing firms that operate (or intend to operate) in emerging markets, and ways in which these challenges can be addressed. Such challenges refer to interfaces between firms and elements in their internal and external environments.

BUS 711-3 Negotiation and Conflict Resolution
Students will learn about interest-based negotiation and conflict resolution theory, strategize and plan for various negotiations and conflict situations and be able to put into practice a practical, efficient, and productive process for negotiating agreements and resolving conflict.
BUS 712-3 Cross-Cultural Management
Exposure to the dilemmas and opportunities that arise within international and multicultural work environments needed in dealing with a global business. Strategies for adopting organizational practices that address these issues will be discussed. Emphasis will be placed on the management of people and groups in international organizations. The focus of the course is on the interaction between people in foreign international work settings rather than interactions between specific countries and/or cultures.

BUS 713-3 Essays
Students will undertake an essay that will generally fall into two of the following three categories: 1. an industry analysis; 2. a firm level analysis; 3. a regional analysis. Other topics of analyses will be considered on a case-by-case basis. Prerequisite: 30 credit hours of course work in the MBA program.

BUS 714-3 New Ventures
The purpose of this course is to teach the basic skills of venturing - how to translate an entrepreneurial vision into action. The course also provides an opportunity for participants to explore their personal situation and assess the desirability of an entrepreneurial career.

BUS 715-2 Operations Management
Students will examine the processes and methods that enable organizations to achieve better productivity, quality, time and information performance. Design and control aspects of effective management and operations as they relate to service and manufacturing entities will also be discussed. The course will explore the management of operations systems, including allocation and scheduling of resources; control of costs, inventories, quality, and manpower; design of operating systems including location, layout and manpower; establishment of work methods and standards.

BUS 716-3 Sustainability
Students will explore how businesses are realigning or reinventing their organizations toward more sustainable business models. Developments that enable organizations to reduce their firms’ negative environmental and social impacts while increasing profits and competitive advantage will be discussed. Students will also learn about managing systems and initiatives for improving the environmental and social performance of organizations and the business system as a whole.

BUS 717-1.5 Essays (completion)
BUS 727-0 MBA Co-op Practicum III
This is the third semester of work experience. This course is open only to MBA students. The course is open only to MBA students. The course provides flexibility to address emergent learning objectives.

BUS 725-4 Strategic Management of Technology-Based Firms
This course deals with how technology-based firms develop and implement strategies to create competitive advantage. The module treats strategy at two levels of analysis: (a) the overall strategy of the firm and (b) the technology strategy of the firm.

BUS 753-2 Ethics and Corporate Responsibility
This course addresses how to navigate the moral quandaries, issues and debates raised by directors and participants in the high-tech economy. Topics include character building practices, moral stages in the high-tech career, corporate social responsibility, the role of reputation capital in the high-tech firm, and the moral and legal obligations of the expert.

BUS 754-4 Marketing Tech-based Products and Services
What differentiates high-tech markets from more traditional ones is the environment “shrinking product life cycles, rapid changes in information and knowledge and great uncertainty about competitors. This course is designed to teach strategies for developing and executing marketing strategies in technology-intensive markets.

BUS 755-2 Topics in International Business
This course will address emerging issues in international business relevant to technology intensive firms. Globalization means that cross-cultural business interactions have become more commonplace.

BUS 756-4 Strategic Use of Information and Knowledge
This course will demonstrate, through cases and discussion, how information can be used to support decision-making, monitor operations and enable global communications. Topics will include knowledge management and information technology to support a learning organization.

BUS 758-4 Business Operations Design
The Business Operations Design course integrates organizational theory and operations management theory to provide a working knowledge of the key elements involved in designing and operating organizations. The course is open to students to the best current thinking for creating effective organizational configurations that realize a desired strategy and achieve the accompanying performance.

BUS 759-4 Special Topics
This course provides flexibility to address emergent topics in Technology Management.

BUS 762-4 Project Management
In high technology firms, projects are a way of life. The introduction of a new product or service, the redesign of an information system, and the opening of a new warehouse are all examples of projects that the technology-driven manager may encounter. This course demonstrates how complexity can be managed in a manner that increases the probability of project success. As a course assignment, students develop their own plan for the project/Internship phase of the program.

BUS 763-2 Managing Self and Others: An Organizational Simulation
An intensive 3-day simulation where students discover what they would actually do when confronted with the reality of working in a company with multiple interdependencies, financial and geographical constraints and a complex and changing environment. Graded on a Satisfactory/Unsatisfactory basis.

BUS 764-4 Financing the Organization
The objective is to teach the foundations of applied finance with respect to the capital raising process and the creation of finance-able business plans. A company “life cycle” approach to financial development is utilized and topics explored include the entrepreneurial process, angel and venture capital financing, legal entities and capital structure, term sheet negotiations, business valuation techniques, going public, debt financing, mergers and acquisitions, financial contracting.

BUS 766-4 Financial and Managerial Accounting
Concepts and principles in financial accounting from the user perspective and the use of accounting information for managerial decision-making.

BUS 770-773-2 Special Topics
BUS 774-4 Special Topics
BUS 776-4 Special Topics in Biotechnology
BUS 778-4 Directed Studies in Management of Technology
This is the third semester of work experience. This course is open only to MBA students. The course provides flexibility to address emergent learning objectives.

Simon Fraser University 2007 • 2008 Calendar
BUS 807-2 Client Relationship and Leadership Effectiveness II
This course is a continuation of the concepts in BUS 806.

BUS 808-2 Client Relationship and Leadership Effectiveness Practice
Assists students in developing self-awareness and the ability to evaluate their leadership. Covers personal leadership plans, effective leadership practices and reflection-in-action and life-long learning practices.

BUS 809-3 Equity Security Analysis and Portfolio Management
Extends concepts covered in the financial economics course sequence to the valuation of equity securities. Topics include the components of fundamental and technical analysis for individual stocks, as well as an analysis of different investment strategies and styles.

BUS 810-3 Fixed Income Security Analysis and Portfolio Management
Covers theories of the term structure, measures of fixed income return, yield-spread analysis and sources of risk in fixed income securities. Specific fixed-income securities analyzed will include option-free bonds as well as bonds with embedded options. This course will also study fixed income portfolio strategies, such as active, passive, hybrid and derivative strategies.

BUS 811-3 International Security Analysis and Portfolio Management
Extends equilibrium asset pricing models to an international context and analyses the implications on equity and fixed income security analysis and portfolio management. Students will be introduced to various international market indices and the role of international securities in investment portfolios. Currency hedging will also be covered.

BUS 812-2 Tax and Estate Planning
Provides students with an understanding of the implications of taxes and intergenerational wealth transfer on portfolio management. It will review basic elements of the tax system, tax-efficient investment vehicles and estate planning. Specific examples of the effect of these factors on investors’ portfolios will be considered. This course will be taught in the context of Canadian tax law, but will also contain selected coverage of the tax codes of other countries, including the U.S. Mechanisms for implementing investors’ charitable concerns will also be considered.

BUS 813-2 Ethics, Wealth Management and the Securities Industry
Reviews the regulatory framework for investment managers and analyses the types of ethical considerations that might arise. Specific topics will include the importance of knowing the client, the nature of fiduciary obligations, suitability, standards of care (i.e., the prudent person and produce expert rules) and the identification and proper management of conflicts of interest.

BUS 814-3 Derivative Securities
An introductory course for GAWM or FRM students in derivative securities. It covers pricing as well as the use of derivative securities in portfolio management and structured transactions.

BUS 815-4 Portfolio Theory
A study of optimum portfolio selections and diversification of financial assets including cash vis-a-vis different classes of utility functions of final wealth. Also, an examination of the behavior of speculative prices and rates of return. Prerequisite: ECON 331. Offered once a year. This is the same course as BUS 815.

BUS 816-3 Investment Policy
A capstone course that focuses on the development of effective investment policy for high net worth as well as institutional investors. It integrates topics in previous courses and is closely linked to BUS 809 Client Relationship Management III.

BUS 817-4 Theory of Capital Markets
A study of capital market equilibrium theories, risk allocation, valuation models under perfect and imperfect markets and their empirical testing. Prerequisite: ECON 331, B35. Offered once a year. This is the same course as BUS 817.

BUS 818-3 Advanced Topics in Business Finance
Extensions of advanced topics beyond those covered BUS 802 and 805. Prerequisite: BUS 814 (co-requisite acceptable).

BUS 819-3 Final Project for GAWM Students
Students will be required to complete a written project equivalent to one full course. A project will generally represent successful research on a topic in asset and wealth management. The project will be supervised by faculty members, but members of the broad investment management community may also participate in the supervisory committee as second readers when appropriate. We hope that topics proposed by members of the Business Council may be suitable from time to time.

BUS 820-2 Final Project (Completion)

BUS 821-2 Final Project for Financial Risk Management Students (Completion)

BUS 823-2 Introduction to Security Analysis
This is a course in the PhD program on a selected topic. Prerequisite: Registration in GAWM program.

BUS 856-4 Special Topics in Financial Risk Management
A course outline must be approved by the Business Graduate Program Committee.

BUS 857-3 Numerical Methods
An introduction to the numerical mathematics of financial models. The aim is to provide students with an overview of the basic computational tools and associated mathematics that are used by financial analysts, financial engineers and risk managers today.

BUS 859-4 Directed Studies in Financial Risk Management
Individual study with a faculty member. A course outline must be approved by the Business Graduate Program Committee.

BUS 863-3 Operational Risk Management
Provides Risk Management students with a working knowledge of Operational Risk Management. The course will focus on emerging models and tools for identifying, measuring, monitoring and mitigating operational risks. Techniques include causal modeling and simulation. Throughout this course, case studies and computer workshops will be used to illustrate and apply technical tools and models.

BUS 864-3 Credit Risk Management
Covers techniques of credit risk management, with emphasis on portfolio models. Models measuring probability of default and loss given default are covered. The course then deals with credit portfolio management and examines portfolio models. Credit capital allocation in banks is covered, as are techniques of active portfolio management, such as credit derivatives and structured credit transactions. Students will have extensive work in EXCEL and EXCEL modeling.

BUS 865-3 Market Risk Management
Includes a comprehensive survey on Value at Risk methodologies (assumptions, choice of models and the amount/type of exposure) used by leading financial institutions worldwide. Advanced Market Risk Models, Statistical Models, Stress Testing and Scenario Analysis, and Risk-adjusted Performance Measurement will also be covered.

BUS 866-3 Enterprise-wide Strategic Risk Management
Provides students with a strategic process that enables them to identify, measure and manage the entire range of business opportunities and risks facing an organization. It covers an overview of the economic forces driving strategic hedging and an analytical framework for measuring product market dynamics, firm structure and financial market volatility. A wide variety of case studies will be used.

BUS 867-2 Accounting for Financial Instruments
Provides a comprehensive definition of all types of financial instruments and develops a thorough understanding of operational accounting and auditing for a broad range of financial instruments.

BUS 868-3 Perspectives on Risk and Insurance
Presents the economic principles underpinning risk and insurance and introduces key risk and insurance concepts and practices. The causes of change in risk management and insurance are examined through exploration of relevant physical, technological, cultural, regulatory, and other environmental perspectives.

BUS 869-3 Topics in Risk Management
Focuses on various topics intended to address integrative and topical issues in financial risk management.

BUS 870-3 Final Project for Financial Risk Management Students
The final project is intended to represent research on a topic in Risk Management. This project is to be completed within the final academic term but may be based on ideas generated in previous academic terms. Projects will be supervised by course instructor(s) or by other faculty members. The format of this course will consist of several in-class sessions as well as regular meetings on an individual basis with the designated project supervisors. In-class sessions will cover topic project presentation and discussion of principal findings.

BUS 974-4 Financial Ecomometrics
BUS 975-2 Selected Topics IV
This is a course in the PhD-program on a selected topic.

BUS 976-2 Selected Topics V
This is a course in the PhD-program on a selected topic.

BUS 977-2 Selected Topics VI
This is a course in the PhD-program on a selected topic.

BUS 978-2 Selected Topics VII
This is a course in the PhD-program on a selected topic.

BUS 980-4 Theory Development in Business Administration
The effective use of empiricism, positivism, and interpretive explanations in generating, defending and clarifying logically rigorous arguments is explored. The effective use of empiricism, positivism, and interpretive explanations in generating, defending and clarifying logically rigorous arguments is explored. The course seeks to advance the participants’ interest in putting theory into practice. Prerequisite: Enrolment in PhD program.

BUS 981-4 Research Methods in Business Administration
Provides an overview of the major quantitative and qualitative analytical methods associated with...
empirical research in Business Administration. This seminar is aimed at providing an overview of the research process, an introduction to the range of research techniques and data analysis appropriate to those techniques. It should develop participants' skills for designing research as well as an ability to critically assess research reported in the literature. To do this, the course will focus on various approaches to research design, discuss the kinds of analyses appropriate to those designs, and introduce computer packages for data analysis, such as Statistical Package for Social Sciences (SPSS). Prerequisite: enrolment in PhD program.

BUS 982-4 Preparing a Thesis
The research process as applied to the student's own thesis topic is examined. The seminar will focus on the planning, structure, and writing process involved in the PhD thesis and seeks to equip participants for publishing and conference presentation in Business Administration. Prerequisite: enrolment in the PhD program.

BUS 983-4 Directed Studies I
Supervised individual study on a topic of the student's choice, under the guidance of one or more faculty. Arrangements for this course must be approved by the graduate chair in advance of registration. Prerequisite: enrolment in PhD program.

BUS 984-4 Directed Studies II
Supervised individual study on a topic of the student's choice, under the guidance of one or more faculty. Arrangements for this course must be approved by the graduate chair in advance of registration. Prerequisite: enrolment in PhD program.

BUS 985-4 Directed Studies III
Supervised individual study on a topic of the student's choice, under the guidance of one or more faculty. Arrangements for this course must be approved by the graduate chair in advance of registration. Prerequisite: enrolment in PhD program.

BUS 986-4 Directed Studies IV
Supervised individual study on a topic of the student's choice, under the guidance of one or more faculty. Arrangements for this course must be approved by the graduate chair in advance of registration. Prerequisite: enrolment in PhD program.

BUS 987-4 Selected Topics I
Specialized study in topics germane to the program, but not covered extensively in other core courses. Prerequisite: enrolment in PhD program.

BUS 988-4 Selected Topics II
Specialized study in topics germane to the program, but not covered extensively in other core courses. Prerequisite: enrolment in PhD program.

BUS 989-4 Selected Topics III
Specialized study in topics germane to the program, but not covered extensively in other core courses. Prerequisite: enrolment in PhD program.

BUS 990-4 Research Project
Students will present a project for formal evaluation by the candidates supervisory committee. Prerequisite: enrolment in PhD program.

BUS 991-4 PhD Candidacy Exam
Students will present a project for formal evaluation by the candidates supervisory committee. Graded on a Satisfactory/Unsatisfactory basis. Prerequisite: enrolment in PhD program.

BUS 992-4 PhD Thesis
Prerequisite: enrolment in PhD program.

Business Administration and Economics BUEC

Business Administration and Economics BUEC
Faculties of Business Administration and Arts
BUEC 232-4 Data and Decisions I
An introduction to business statistics with a heavy emphasis on applications and the use of EXCEL.
Students will be required to use statistical applications to solve business problems. Prerequisite: MATH 157 and 15 credit hours. MATH 157 may be taken concurrently with BUEC 232.
Introduction to Probability and Statistics, will be accepted in lieu of BUEC 232. Students with credit for STAT 270 may not take BUEC 232 for further credit. Quantitative.

BUEC 280-3 Introduction to Labor Economics
Basic analysis of the labor market and the industrial relations system with emphasis on the major issues of public policy in Canada. Prerequisite: ECON 103 or 200 and 105 or 205. Students who have taken ECON 301, 305 or 381 may not take BUEC 280 for further credit. Quantitative.

BUEC 333-4 Statistical Analysis of Economic Data
An introduction to the use and interpretation of statistical analysis in the context of data typical of economic applications. Prerequisite: ECON 103 or 200; ECON 105 or 205; BUEC 232 or STAT 270; MATH 157; 60 credit hours. Students with a minimum grade of A- in BUEC 232 or STAT 270 can take BUEC 333 after 30 credit hours. Students seeking permission to register based on their BUEC 232 or STAT 270 grade must contact the Undergraduate Advisor in Economics. Students with credit for ECON/COMM 236 may not take BUEC 333 for further credit. Quantitative.

BUEC 391-3 Law in the Economic Society
An introductory examination of the history, evolution and aspirations of the rule of law in general, and as pursued and developed within civil and common law jurisdictions with emphasis on the working of the Canadian Federal and Provincial legislative, administrative and judicial forces, in particular. Students will be encouraged to identify and analyze various socio-economic legal issues and how legal principles are developed within the concepts of Canadian law and its reaction to evolving socio-economic forces that affect our individual and collective legal rights, duties and privileges and powers. Prerequisite: 60 credit hours. BUEC 391 may not be taken concurrently with BUS 393. Students with credit for BUEC 293 may not take BUEC 391 for further credit.

BUEC 396-3 The Structure of Industry
Examination of the structure, conduct and performance of specific industries, exploring the degree of concentration, the nature and extent of competitive behavior and the factors affecting particular industry patterns. Emphasis will be upon the Canadian economy, and consideration will be given to the efforts and implications of "non-pure" competitive structures. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours. Quantitative.

BUEC 397-5 Government and Business
The theory and practice of the control of monopoly and maintenance of competition. The need for development of public policies with regard to the regulation of business activity; anti-competitive business practices; anti-trust legislation in Canada and the United States and its judicial interpretation; the preservation of competition as a means of regulating private business; alternative approaches to the monopoly problem. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours.

BUEC 427W-3 Industrial Organization: Law and Economics
An in depth examination of the application of economic reasoning to the law. The course considers how legal relationships influence behavior and how economic models can explain the structure of the law. A selected number of topics will be covered, and may include the economic approach to common law; property rights; contracts; torts; criminal behavior; family law; and corporate law. Prerequisite: ECON 301. Students with credit for BUEC 495 cannot take this course for further credit. Writing.

BUEC 433-5 Forecasting in Business and Economics
Modern techniques of statistical, econometric, population and technological forecasting are presented along with discussions of a wide range of topics including Box-Jenkins methods, leading indicators, survey data, world models and the use of information sets of increasing size. Applied work on the Canadian and BC economies. Prerequisite: BUEC 333; 60 credit hours.

BUEC 485-3 Negotiations and Conflict Management
Negotiation is the art and science of securing agreements between two or more parties that are interdependent and who are seeking to maximize their outcomes. The purpose of this course is to understand the theory and processes of negotiation as it is practiced in a variety of settings. The course will allow participants the opportunity to develop these skills experientially and to understand negotiation in useful analytical frameworks. Prerequisite: 60 credit hours; BUS 272 and 360. Students with credit for BUEC 385 or 386 may not take BUEC 485 for further credit.

Canadian Studies CNS

Faculty of Arts and Social Sciences
CNS 160-3 The Social Background of Canada
This course analyses the foundations and attributes of modern Canadian society using an interdisciplinary approach. As an introduction to Canadian Studies, the major themes of the course are social conflict and social change. Topics include French-English relations, Canada and the United States, the development of Canadian identity, and the social movements of the last century. Prerequisite: 120 credit hours. Students with credit for CNS 210 may not take CNS 210 for further credit.

CNS 210-3 Foundations of Canadian Culture
An introductory study of Canada, which uses a variety of disciplinary methods to understand and assess Canada’s unique culture. The course draws on material from history, law, literature, politics, sociology and the fine arts in order to explore regional diversity and national needs and the nature of Canada as a bilingual and multicultural state.

CNS 280-3 Canadian Political Economy
An introductory study of Canada’s political economy, stressing the interrelated nature of Canada’s economic and political life. The course focuses on current economic problems and policies, taking into account the geographical, historical and political environments. Topics include the resource sector, industrial structures, research and development, the public sector, fiscal and monetary policy, the role of the state, trade and foreign ownership, energy, regional disparity, corporate concentration and foreign ownership. This course is identical to POL 223 and students cannot take both courses for credit.
CNS 360-4 Interdisciplinary Readings in Canadian Studies
Allows students to pursue in depth a particular Canadian problem from an interdisciplinary perspective. Prerequisite: 60 credit hours. Please refer to course outline before registering.

CNS 390-3 Hockey in Canadian Popular Culture
The game of hockey is perhaps the most central and pervasive form of popular culture in Canada. It has been called ‘the tie that binds,’ the ‘common passion,’ and the ‘Canadian game.’ This course seeks to create a critical understanding of how hockey’s significance extends far beyond the ice rink into the cultural, economic and political spheres of Canadian society. Prerequisite: at least 60 credit hours. Students who have taken this course as CNS 390 Topics in Canadian Popular Culture cannot take this course for further credit.

CNS 391-3 Special Canadian Topics
An intensive interdisciplinary exploration of particular topics that illustrate aspects of the Canadian reality. Prerequisite: to be 60 credit hours.

CNS 392-3 Cyberspace: The Next Canadian Frontier?
Examines cyberspace and virtual reality as the next Canadian frontier to be explored. The cross-section of material from various disciplines will be used as a starting point in the examination of Critical issues and problems that face Canadians in cyberspace and virtual reality research, with an aim to situate a Canadian cultural consciousness, and/or a Canadian sensitivity towards this new and burgeoning space. Prerequisite: 60 credit hours. Students who have taken CNS 391 Special Canadian Topics: Cyberspace: the Next Frontier? may not take CNS 392 for further credit.

CNS 393-3 Canadian Humor
An examination of the structures of Canadian humour as a window on Canadian popular culture, self-identity, and the role of comedy in the marketing of Canadian cultural production. Prerequisite: 60 credit hours. Students who have taken CNS 391 with same title may not take this course.

CNS 481-3 Special Regional Topics
The role of the regions of regionalism in Canada is increasing in importance, as the burden of the unity debate extends outwards from the Ontario/Quebec divide. This seminar will provide students with a grounding in interdisciplinary readings pertaining to the topic and an opportunity to pursue directed research on a specific topic of their choice. Prerequisite: 60 credit hours. Students who have taken CNS 481 Special Topics may not take CNS 481 for further credit.

CNS 490-5 The Canadian Intellectual Tradition
An interdisciplinary seminar examining some of the major forces that have shaped and continue to shape Canadian thought, expression and society. Materials and theories will be drawn from historiography, history, philosophy, religion, politics, political economy, policy studies, literature, art and sport. Prerequisite: at least 60 credit hours.

CNS 491-3 Technology and Canadian Society
This course examines and assesses technology and its impact on Canadian society. It concentrates on 20th century technology and uses a case study approach examining some broad themes in the study of technology such as: technological determinism, technological impact assessment, innovation, technology as progress, technological dependency, technological sovereignty, and bias in technology. Prerequisite: at least 60 credit hours.

CNS 495-5 Canadian Studies Honors Essay
An essay required of each honors student in Canadian Studies. Honors students who have taken a substantial interdisciplinary research effort by the student under the supervision of Canadian Studies faculty in the appropriate disciplines. A paper based on the essay must be presented in a Canadian Studies seminar. Prerequisite: registration as honors student in Canadian Studies.

Chemistry CHEM

Chemistry CHEM Faculty of Science

CHEM 110-3 Introductory Chemistry I
General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, chemical bonding; properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course has the same lecture component as CHEM 111 but no laboratory work. Students who intend to take further laboratory courses in chemistry must take CHEM 111. Prerequisite: BC high school mathematics 12 (or equivalent) or permission of the department. No previous training in chemistry is required for this course. Students with credit for high school chemistry 12 (or equivalent), or any university chemistry course may not take CHEM 110 or 111 for further credit. Students may not count both CHEM 110 and 111 for credit. Corequisite: if school mathematics 12 credit not obtained, then MATH 100 must be taken as a corequisite to CHEM 110. Quantitative/Breadth-Science.

CHEM 111-4 Introductory Chemistry and Laboratory
General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, chemical bonding; properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course includes a laboratory component. Prerequisite: BC high school mathematics 12 (or equivalent) or permission of the department. No previous training in chemistry is required for this course. Students with credit for high school chemistry 12 (or equivalent), or any university chemistry course may not take CHEM 110 or 111 for further credit. Students may not count both CHEM 110 and 111 for credit. Corequisite: if BC high school Mathematics 12 credit not obtained, then MATH 100 must be taken as a corequisite to CHEM 111. Quantitative/Breadth-Science.

CHEM 120-3 General Chemistry I
Atomic and molecular structure; chemical bonding; thermochemistry; elements; periodic table; gases, liquids, solids, and solutions. This course has the same lecture component as CHEM 121 but no laboratory work. Students who intend to take further laboratory courses in chemistry must take CHEM 121. Prerequisite: BC high school chemistry 12 or CHEM 110 or CHEM 111 (or 110). Students may not count both CHEM 120 and 121 for credit. Recommended: MATH 151 (or 154) and PHYS 120 (or 101) as a corequisite. Quantitative/Breadth-Science.

CHEM 121-4 General Chemistry and Laboratory I
Atomic and molecular structure, chemical bonding; thermochemistry; elements; periodic table; gases, liquids, solids, and solutions. This course includes a laboratory component. Prerequisite: BC high school chemistry 12 or CHEM 111 (or 101 and 106). Students may not count both CHEM 120 and 121 for credit. Recommended: MATH 151 (or 154) and PHYS 120 (or 101) as a corequisite. Quantitative/Breadth-Science.

CHEM 122-2 General Chemistry II
Chemical equilibria; electrochemistry; chemical thermodynamics; kinetics. Students who intend to take further laboratory courses in chemistry should take CHEM 122 concurrently with CHEM 126. Prerequisite: CHEM 121 or 120 (or 102) Recommended: MATH 152 (or 155) and PHYS 121 (or 102) as a corequisite. Quantitative.

CHEM 126-2 General Chemistry Laboratory II
Experiments in chemical equilibrium, acids and bases, qualitative analysis, electrochemistry and chemical kinetics. Prerequisite: CHEM 121 (or 102 and 115). Corequisite: CHEM 122. Quantitative.

CHEM 180-3 The Chemistry of Life
A basic introduction to chemical kinetics, thermodynamics, electrochemistry, and equilibria as they apply to the structure and function of biomolecules. Concepts will be illustrated using modern examples of biological systems. Students will be introduced to central ideas and selected molecular engineering methods in biochemistry and molecular biology. Prerequisite: CHEM 121.

CHEM 191-3 Living in a Materials World: From the Stone Age to Nanoscience
A survey of materials that have been used throughout human history, from stone, bone and wood to modern plastics and superconductors. The chemical principles that give rise to different materials’ properties will be examined, with an emphasis on how small changes at the molecular level can have important implications in everyday life. We will also trace the development of new materials and how they have been perceived and studied throughout the ages. Intended for both science and non-science students. Quantitative/Breadth-Science.

CHEM 192-3 Chemistry in Your Home, Work, and Environment
The impact of chemistry on modern living. Students will gain a broad perspective on chemical processes with historical, environmental and economic importance in shaping society, examining both the beneficial and harmful aspects of the chemicals that shape our lives. Topics may include: perfumes, explosives, drugs, dyes, plastics, pesticides and greenhouse gases. Intended for both science and non-science students. Breadth-Science.

CHEM 193-3 Close Encounters of the Radioactive Kind
An introduction to the concepts of radiation and nuclear science. Emphasis will be placed on applications; by the end of the term students will be able to make well-informed decisions on the role of nuclear science and its use. Intended for both science and non-science students. Breadth-Science.

CHEM 215-4 Introduction to Analytical Chemistry
The principles of analytical chemistry and their practical application to solution samples. Titrimetric and electrochemical methods. Prerequisite: CHEM 122 (or 103) and 126 (or 118), Quantitative.

CHEM 230-3 Inorganic Chemistry
The chemistry of the elements and their inorganic compounds in terms of fundamental concepts of periodicity of properties, valence, ionization potential, electron affinity, electronegativity, stability of oxidation states, bonding, structure and stereochemistry. Co-ordination complexes and organometallic chemistry. Prerequisite: CHEM 122 (or 103). Corequisite: students who expect to take further courses in inorganic chemistry should take the laboratory course CHEM 236 concurrently with 230. Quantitative.

CHEM 236-3 Inorganic Chemistry Laboratory
An introduction to the synthetic and spectroscopic techniques used in the preparation and characterization of both main group and transition metal compounds. Prerequisite: CHEM 122 and 126 (or 103 and 118). Corequisite: CHEM 230. Quantitative.

CHEM 236W-3 Inorganic Chemistry Laboratory
An introduction to the synthetic and spectroscopic techniques used in the preparation and
characterization of both main group and transition metal compounds. Prerequisite: CHEM 122 and 126 (or 103 and 118). Corequisite: CHEM 230. Writing/Quantitative.

CHEM 260-4 Atoms, Molecules, Spectroscopy
Elements of physical chemistry from the molecular point of view. Introduction to quantum chemistry, atomic and molecular structure, and spectroscopy. Prerequisite: CHEM 122 (or 103), MATH 152, PHYS 121. Recommended: MATH 232. Quantitative.

CHEM 281-4 Organic Chemistry I
Structure, bonding, physical and chemical properties of simple organic compounds. Introduction to spectroscopy. Kinetics and mechanisms of organic reactions. This course includes a laboratory component. Prerequisite: CHEM 121. Corequisite: CHEM 122 (or 103). Quantitative.

CHEM 282-2 Organic Chemistry II

CHEM 286-2 Organic Chemistry Laboratory II
Laboratory work chosen to complement CHEM 282. Prerequisite: CHEM 281. Corequisite: CHEM 282. Quantitative.

CHEM 306-3 Practicum I
This is the first semester of work experience in a co-operative program available to students planning to pursue a career in chemistry or related areas. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: completion of 28 credit hours in a science program, including first-year calculus, chemistry and physics. Minimum CGPA 2.67 (or permission of co-op co-ordinator).

CHEM 307-3 Practicum II
This is the second semester of work experience in the Chemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CHEM 306 and completion of 42 credit hours toward a BSc degree. Minimum CGPA 2.67 (or permission of co-op co-ordinator).

CHEM 316-4 Introductory Instrumental Analysis
Principles and applications of basic analytical instrumentation based upon spectroscopy, chromatography and electrochemistry. Prerequisite: CHEM 215 (or 218) and CHEM 260, or permission of the department. Students may not count both CHEM 316 and 416 for credit. Quantitative.

CHEM 317-2 Analytical Environmental Chemistry
Principles and applications of the methodologies of analytical chemistry employed in the determination of substances in air, water, and soil, with particular emphasis upon sampling and sample preparation. Prerequisite: CHEM 316 and 371. Corequisite: CHEM 372 should be taken concurrently. Quantitative.

CHEM 332-3 The Chemistry of Transition Metals
The synthesis and characterization of classical and organometallic complexes of the transition metals, and their physical and chemical properties. Prerequisite: CHEM 230, 236 and 260, or permission of the department. Quantitative.

CHEM 333-3 Inorganic Chemistry of Biological Processes
An introduction to the principles governing the formation, properties and investigation of metal-ligand complexes with special reference to the role of metals in biological processes. Prerequisite: MBB 321 (or BICH 301 or 321); or CHEM 282 (or 250) and CHEM 230 (or 232.) Quantitative.

CHEM 336-2 Advanced Inorganic Chemistry Laboratory
Laboratory experiments in co-ordination, organometallic and solid state chemistry, involving synthesis, characterization and spectroscopy. Prerequisite: CHEM 236, Corequisite: CHEM 332 must precede or be taken concurrently. Quantitative.

CHEM 340-3 Materials Chemistry
Bonding in solid state materials. Introduction to symmetry and its applications in materials science. Structure and physical properties of solid state materials. Prerequisite: completion of 60 credit hours in a science or applied science program, including first year chemistry, physics and calculus. Quantitative.

CHEM 360-3 Thermodynamics and Chemical Kinetics
Elements of physical chemistry from the macroscopic point of view. Thermodynamics, and its applications to chemical equilibrium. Chemical kinetics and reaction rate theories. Prerequisite: CHEM 122 (or 103), MATH 152 (or 155), PHYS 121 (or 102). Recommended: MATH 251. Quantitative.

CHEM 366-2 Physical Chemistry Laboratory I

CHEM 366W-2 Physical Chemistry Laboratory I

CHEM 367-2 Physical Chemistry Laboratory II
Continues CHEM 366. Prerequisite: CHEM 366. Quantitative.

CHEM 371-3 Chemistry of the Aqueous Environment
An introduction to chemical processes in the aqueous environment. Quantitative treatment of the variables determining the composition of natural systems. Chemistry of aqueous toxic agents, wastewater treatment, and related matters. Prerequisite: CHEM 281 (or 150) and CHEM 360 (or 261). Quantitative.

CHEM 372-3 Chemistry of the Atmospheric Environment
Quantitative treatment of chemical and physical processes in the atmospheric environment. Chemistry of the troposphere including air pollution and climate change. Chemistry of the stratosphere including ozone depletion. Environmental radioactivity. Current topics. Prerequisite: CHEM 281 (or 150) and CHEM 360 (or 261). Quantitative.

CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
Basic principles of infrared, ultraviolet, nuclear magnetic resonance and mass spectroscopy as applied to the identification of organic compounds. Prerequisite: CHEM 260 and 282 and 286 (or 250 and 255), or permission of the department.

CHEM 381-4 Intermediate Organic Chemistry
An intermediate level course in modern organic chemistry, including both theoretical design of synthetic routes and practical training in the laboratory. The central topics to be discussed include methods to form carbon-carbon bonds, use of organometallic reagents, asymmetric synthesis, pericyclic reactions, the use of enzymes in organic synthesis, and the automation of synthetic organic chemistry. Prerequisite: CHEM 380. Quantitative.

CHEM 406-3 Practicum III
This is the third semester of work experience in the Chemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CHEM 307 and completion of 56 credit hours toward a BSc degree. Minimum CGPA of 2.67 (or permission of co-op co-ordinator).

CHEM 407-3 Practicum IV
This is the last semester of work experience in the Chemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CHEM 406. Minimum CGPA of 2.67 (or permission of co-op co-ordinator).

CHEM 408-3 Practicum V
Optional semester of work experience in the Chemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CHEM 407.

CHEM 419-3 Special Topics in Analytical Chemistry
Principles and applications of emerging techniques in analytical chemistry. Prerequisite: CHEM 316.

CHEM 432-3 Organometallic Chemistry
The organometallic chemistry of the transition elements; the synthesis, characterization and catalytic behavior of organometallic compounds. Prerequisite: CHEM 332. Quantitative.

CHEM 439-3 Special Topics in Inorganic Chemistry
An in-depth treatment of a current topic in inorganic chemistry. Contact the department for information regarding the topic to be covered in a given semester. Prerequisite: CHEM 332.

CHEM 440-3 Solid State Materials Chemistry
The study of the detailed chemistry of solid state inorganic materials in terms of crystal structures, bonding, preparative methods, analytical and characterization techniques, mixed valence states, solid solutions, defects and non-stoichiometry, molecular mechanisms of the optical, electronic, ionic, magnetic and dielectric properties, and materials applications in advanced technology. Prerequisite: CHEM 340. Quantitative.

CHEM 442-3 Polymeric Materials Chemistry
The course covers the detailed chemistry of polymers, including polymer structure, studies of polymer solutions, molecular weight determination, and the synthesis of polymers. In addition, topics of current interest in polymer science will be discussed. Prerequisite: CHEM 282. Quantitative.

CHEM 444-3 Organic Materials Chemistry
Emphasis will be placed on the synthesis and properties of materials that are useful in the design of electrooptical devices, such as light emitting diodes (LEDs) and liquid crystal displays (LCDs). Topics to be discussed will include liquid crystals, conjugated polymers, and the assembly of thin film materials. A case study approach will be employed in order to provide an overview of these areas of research, with examples taken from the primary literature. Prerequisite: CHEM 282. Quantitative.

CHEM 450-3 Physical Organic Chemistry
A study of the structure, stereochemistry and conformation of molecules and their effect on the reactivity of organic molecules. The physical basis of organic chemistry. Prerequisite: CHEM 360 (or 261) and 380. Quantitative.

CHEM 452-3 Bio-organic Chemistry
An advanced treatment of the use of enzymes in organic synthesis, the use of stable and radioisotopes in the study of enzymatic processes and the design of enzyme inhibitors. Prerequisite: CHEM 381 or permission of the department. Quantitative.

CHEM 455-3 Synthetic Organic Chemistry
This course teaches the principles involved in the planning and execution of the synthesis of organic
molecules. Emphasis is on synthesis of naturally occurring compounds of biological importance. Prerequisite: CHEM 381 or permission of the instructor. Quantitative.

CHEM 493-3 Special Topics in Organic Chemistry
An advanced in-deptht treatment of a specialized area of organic chemistry. Prerequisite: CHEM 380 or permission of the instructor.

CHEM 460-3 Advanced Physical Chemistry
Statistical thermodynamics, kinetic theory of gases, transport properties, intermolecular forces, electrical properties of molecules, properties of ionic solutions, Debye-Hückel theory, electrochemistry. Prerequisite: MATH 251; CHEM 260 and 360, or PHYS 385 and 344 (or 244). Quantitative.

CHEM 462-3 Molecular Spectroscopy

CHEM 464-3 Quantum Chemistry
Fundamentals of quantum mechanics and its principal results and techniques as applied to atoms and molecules: atomic structure, molecular bonding, rotations and vibrations of molecules, symmetry of atomic and molecular orbitals. Prerequisite: CHEM 260. MATH 232, 251, or PHYS 385. Recommended: MATH 310. Quantitative.

CHEM 465-3 Electrochemistry
Modern techniques and concepts in electrochemistry. Topics include equilibrium and dynamic electrochemistry, ion transport and voltammetry. Electrochemical systems of increasing importance including chemically modified electrodes, fuel cells and solar energy conversion applications will also be discussed. Prerequisite: CHEM 360. Quantitative.

CHEM 466-3 Special Topics in Physical Chemistry
Selections of physical chemistry not regularly covered in the chemistry undergraduate course offerings. Topics may vary from year to year and may include (but are not limited to): chemical kinetics, electrochemistry, magnetic resonance, polymer chemistry, surface chemistry. Prerequisite: CHEM 260 and 360 (or 261 and 361) or permission of the instructor.

CHEM 481-5 Undergraduate Research
Experimental and/or theoretical research; preparation of a written report and oral presentation in research seminar format. Admission requires selection of a faculty supervisor and submission of a research proposal. Prospective students must contact the chemistry advisor to register their interest in this course before the last day of classes of the previous semester. Research proposal is due by the end of the examination period preceding the research semester. Prerequisite: permission of the department; knowledge of chemistry at an advanced level. Normally taken after completion of 300 level course requirements.

CHEM 482-3 Directed Study in Advanced Topics of Chemistry
Directed reading in a topic chosen in consultation with a supervisor. Admission requires selection of a faculty supervisor and submission of a study topic to the department at least one month prior to the start of the semester in which the course will be taken. Prerequisite: permission of the department. Normally taken during the fourth year of study.

CHEM 483-5 Honors Research
Experimental and/or theoretical research; preparation of a written report and oral presentation in research seminar format. Admission requires selection of a faculty supervisor and submission of a research proposal. Prospective students must contact the chemistry advisor to register their interest in this course before the last day of classes of the previous semester. The research proposal is due by the end of the examination period preceding the research semester. Prerequisite: CHEM 481 and permission of the department. Credit for this course may only be applied to the honors chemistry program.

CHEM 740-3 Solid State Materials Chemistry
The study of the detailed chemistry of solid state inorganic materials in terms of crystal structures, bonding, preparative methods, analytical and characterization techniques, mixed valence states, solid solutions, defects and non-stoichiometry, mechanisms of the optical, electronic, ionic, magnetic and dielectic properties, and materials applications in advanced technology.

CHEM 742-3 Polymeric Materials
The course covers the detailed chemistry of polymers, including polymer structure, studies of polymer solutions, molecular weight determination, and the synthesis of polymers. In addition, topics of current interest in polymer science will be discussed.

CHEM 744-3 Organic Materials Chemistry
This is an advanced level course in modern organic materials chemistry. Emphasis will be placed on the synthesis and properties of materials that are useful in the design of electrooptical devices, such as light emitting diodes (LEDs) and liquid crystal displays (LCDs). Topics to be discussed will include liquid crystals, conjugated polymers, and the assembly of thin film materials. A case study approach will be employed in order to provide an overview of these areas of research, with examples taken from the primary literature.

CHEM 750-3 Physical Organic Chemistry
An advanced treatment of mechanism and structure in organic chemistry and the use of physical methods as probes of structure, stereochemistry and conformation.

CHEM 752-3 Bio-organic Chemistry
An advanced treatment of the use of enzymes in organic synthesis, the use of stable and radio isotopes in the study of enzymatic processes, and the design of enzyme inhibitors.

CHEM 754-3 Carbohydrate Chemistry
A detailed treatment of the structure and reactions of monosaccharides, the use of carbohydrates as chiral templates in organic synthesis, advances in glycoside synthesis, the occurrence, chemistry, and conformational analysis of complex carbohydrates and their role in biological systems.

CHEM 755-3 Synthetic Organic Chemistry

CHEM 759-3 Special Topics in Inorganic Chemistry
An advanced treatment of specific topics related to the study of organic compounds. Topics which will be discussed will vary from one semester to the next.

CHEM 801-3 Student Seminar
Discussion of recent literature in chemistry through student seminars.

CHEM 802-3 Student Seminar II
CHEM 819-3 Special Topics in Analytical Chemistry
In-depth coverage of a particular area of analytical chemistry. Example subject areas include separation science, mass spectrometry, optical spectroscopy, electrochemistry, or surface science. Occasionally the subject matter of this course will be a survey of recent advances in the field.

CHEM 832-3 Organometallic Chemistry
An advanced treatment of the synthesis, structures, reactions and spectroscopic identification of inorganic compounds.

CHEM 833-3 Recent Advances in Main Group Chemistry
Important developments in main group chemistry in recent years will be examined in the context of the basic chemistry of the elements involved; not every element or group will necessarily be discussed.

CHEM 839-3 Special Topics in Inorganic Chemistry
An advanced, in-depth treatment of a specialized area of inorganic chemistry.

CHEM 842-3 Special Topics in Radiochemistry
Theory and practical techniques of the current uses of radioactive isotopes in systems of chemical interest.

CHEM 863-3 Magnetic Resonance
Principles, techniques and applications of NMR and ESR.

CHEM 864-3 Quantum Chemistry
Non-relativistic quantum mechanics. Atomic and molecular structure, perturbation theory, variation method.

CHEM 865-3 Electrochemistry
Modern techniques and concepts in electrochemistry. Topics include equilibrium and dynamic electrochemistry, ion transport and voltammetry. Electrochemical systems of increasing importance including chemically modified electrodes, fuel cells and solar energy conversion applications will also be discussed.

CHEM 869-3 Special Topics in Physical Chemistry
A specialized area of physical chemistry will be selected from a list of topics.

CHEM 881-0 Co-op Practicum I
First semester work experience term for graduate students. Prerequisite: completion of MSc thesis including defence.

CHEM 882-0 Co-op Practicum II
Second semester work experience term for graduate students. Prerequisite: completion of MSc thesis including defence.

CHEM 899-6 MSc Thesis
A thesis for the MSc degree may be written on a topic in either chemistry or chemical education. Students electing to write a thesis in chemical education, are required to complete satisfactorily 10 hours of course work in the Faculty of Education in addition to the minimum chemistry degree requirements. The 10 units of course work in the Faculty of Education may not be used for credit towards the PhD degree in Chemistry if the student transfers into the PhD program.

CHEM 899-6 PhD Thesis
Chinese CHIN
Faculty of Arts and Social Sciences
Department of Linguistics
Language Training Institute
CHIN 100-3 Mandarin Chinese I
Introduction to the study of Mandarin Chinese and to the development of basic oral and written skills for those with no background in Mandarin. Students will study phonetics, vocabulary, syntax, grammar and culture.

CHIN 101-3 Mandarin Chinese II
Continues to build on all four language skills acquired in CHIN 100. Prerequisite: CHIN 100 or equivalent.
CHIN 151-3 Spoken Mandarin for Speakers of Other Chinese Dialects I
Designed for speakers of a Chinese dialect other than Mandarin, e.g., Cantonese. Learners will come to the course with no ability in spoken Mandarin, but some command of Chinese reading and writing. By the end of CHIN 151, students will be able to use spoken Mandarin at a basic level. Prerequisite: no knowledge of spoken Mandarin; placement interview. Students who have taken CHIN 151 (Spoken Mandarin for Speakers of Other Chinese Dialects) may not take this course for further credit.

CHIN 152-3 Spoken Mandarin for Speakers of Other Chinese Dialects II
Designed for speakers of a Chinese dialect other than Mandarin, e.g., Cantonese. Learners will come to the course with novice level proficiency in spoken Mandarin and a good command of Chinese reading and writing. By the end of CHIN 152, students will have improved their pronunciation and aural comprehension of spoken Mandarin and have enhanced their conversational skills. Prerequisite: CHIN 151 or equivalent.

CHIN 185-6 Intensive Mandarin Chinese in the China Field School
This six week intensive language study course will be taken by all students registering in the China Field School. Upon arrival at the university in China, students will be assigned to two course sections at the appropriate level according to their language skills from beginners to upper intermediate in reading, writing, comprehension, conversation and grammar. For students wanting to continue their language studies at SFU after attending the field school, the Chinese language instructor will conduct a placement interview and assign the appropriate course level.

CHIN 200-3 Mandarin Chinese III
Continues to build on all four skills of the language acquired in CHIN 101/102, with special emphasis on improving the students’ spoken facility in the language. Prerequisite: CHIN 102 or equivalent.

CHIN 201-3 Mandarin Chinese IV
Continues to build on all four skills of the language acquired in CHIN 200, with special emphasis on improving the students’ spoken facility. Prerequisite: CHIN 200 or equivalent.

Cognitive Science COGS
Faculty of Arts and Social Sciences

COGS 100-3 Introduction to Cognitive Science
This course provides a basic integrative overview of how cognitive science aspires to integrate the empirical findings, theories, and methods of psychology, neuroscience, linguistics, computing science and philosophy. Prerequisite: Open to all students. Students with credit for COGS 200 may not take COGS 100 for further credit.

COGS 200-3 Foundations in Cognitive Science
An introduction to major empirical methods and theoretical frameworks for exploring the mind that examines some of the foundational debates that have fueled investigations over the past fifty years. Taking an interdisciplinary approach, the course illustrates how a convergence of ideas from psychology, philosophy, linguistics and computer science has led to deep explanations of a range of cognitive science topics. Prerequisite: COGS 100. Students who have taken COGS 200 before 1998 may take this course for further credit.

COGS 300-3 Selected Topics in Cognitive Science
An interdisciplinary exploration of recent work on some special topic in cognitive science (such as vision, reasoning, connectionism, etc.) Prerequisite: lower division cognitive science course requirements. Students with credit for COGS 400 may not take COGS 300 for further credit.

COGS 310-3 Consciousness
Explores the topic of consciousness, often called “the last great mystery of science,” focusing on current scientific theories and empirical investigations from philosophy, psychology, and neuroscience. Prerequisite: COGS 100 and 200 (or permission of the instructor).

COGS 370-3 Cognitive Science Practicum I
First semester of work experience in the Cognitive Science Co-operative Education Program. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 30 credit hours, including COGS 100 and four other courses in the Cognitive Science program, with a minimum CGPA of 2.75.

COGS 371-3 Cognitive Science Practicum II
Second semester of work experience in the Cognitive Science Co-operative Education Program. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of COGS 375 and 45 credit hours with a minimum CGPA of 2.75.

COGS 470-3 Cognitive Science Practicum III
Third semester of work experience in the Cognitive Science Co-operative Education Program. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of COGS 371 and 60 credit hours with a minimum CGPA of 2.75.

COGS 471-3 Cognitive Science Practicum IV
Fourth semester of work experience in the Cognitive Science Co-operative Education Program. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of COGS 470 and 75 credit hours with a minimum CGPA of 2.75.

COGS 490-5 Honors Project I
An in-depth investigation of a topic in Cognitive Science culminating in a critical literature review and the formulation of a research proposal. Prerequisite: approval of cognitive science steering committee after student has completed a cognitive science major and at least two courses specified under honors in the program calendar entry.

COGS 491-5 Honors Project II
The research proposed in COGS 490 is executed, culminating in the completion of a substantive piece of research. Prerequisite: approval of Cognitive Science steering committee either when student has completed COGS 490 or when student is taking COGS 490.

Communication CMNS
Faculty of Applied Sciences

CMNS 110-3 Introduction to Communication Studies
An introduction to selected theories about human communication. This course is required for a major, honors or minor in communication. Breadth-Social Sciences.

CMNS 130-3 Explorations in Mass Communication
An introduction to the role of mass communication (radio, television, telecommunications and the press) in Canadian society. This course is required for a major, honors or minor in communication.

CMNS 130W-3 Explorations in Mass Communication
An introduction to the role of mass communication (radio, television, telecommunications and the press) in Canadian society. This course is required for a major, honors or minor in communication. Writing.

CMNS 200-3 Effective Communication
Introduction to techniques and methods of communicating effectively in complex organizations; with the media, government, the public; in the work place, in local and international business and trade, etc. The challenge of working in meetings, doing research in teams, preparing analytic/technical reports and press statements, managing complex interactive communication processes will be addressed, with special reference to the role of culture, policy, and legal, technical change, and potential conflict. Prerequisite: 25 credit hours. Recommended: for communication co-op students.

CMNS 210-3 Media History
An assessment of the social implications of developments in information technology from prehistory to the middle of the 20th century. Topics include: the origins of symbolic representation; the oral tradition; the significance of different systems of writing and numeration; the consequences of print; and the initial changes brought about by electronic media. Prerequisite: CMNS 110.

CMNS 220-3 Understanding Television
This course examines television, both as a medium of communication and an element of culture. Prerequisite: CMNS 110 and 130.

CMNS 221-3 Media and Audiences
An introduction to the study of popular culture and mass media, with a focus on the organization and role of audiences. Prerequisite: CMNS 110 and 130.

CMNS 223-3 Advertising as Social Communication
An interdisciplinary examination of the significance of advertising as a social message system in our consumer society. The course proposes an analytical method for appreciating the changing styles and functions of advertising in the 20th century. Prerequisite: CMNS 110 and 130.

CMNS 223W-3 Advertising as Social Communication
An interdisciplinary examination of the significance of advertising as a social message system in our consumer society. The course proposes an analytical method for appreciating the changing styles and functions of advertising in the 20th century. Prerequisite: CMNS 110 and 130. Writing.

CMNS 226-3 Digital Media Communication Techniques
This course introduces students to a variety of digital media communication technologies and techniques, including image and sound capturing and manipulation, Internet-based publishing and work presentation, video and research, digitizing, editing and archiving. Design and management tasks involved in communicating using digital media are also introduced, including strategic and research planning, data integrity management, file structuring and packaging, and work presentation. Prerequisite: CMNS 110 and 130. Recommended: CMNS 220.
CMNS 230-3 The Cultural Industries in Canada: Global Context
What do we mean when we talk about the 'cultural industries' today? This course explores the business structure and economics of the cultural sectors, the regulatory and policy frameworks, and their social and cultural contexts. Students are encouraged to develop, compare and contrast at least two sectors from the audio, print or visual industries. While the primary focus is on the Canadian case, students will be encouraged to look at other countries. Overriding themes explore the following: relationships between public and private sectors; independent and commercial creators; rights of creators versus distributors; specialty and general media; indigenous and global contents. Prerequisite: CMNS 130.

CMNS 235-3 Introduction to Journalism in Canada
An overview of journalism as a social, cultural and political institution in Canada. Topics include: themes of news; print and electronic journalism; journalism and politics; history of Canadian journalism; legal, technological, professional, corporate and ethical influences. Prerequisite: CMNS 130.

CMNS 240-3 The Political Economy of Communication
Examines the political and economic processes that have generated the policies and structures of mass media, telecommunications and related industries; the relationship between the dichotomies of state and market, citizen and consumer, capitalism and democracy, global and local, and sovereignty and globalization in media industries and policies; overview of influences on State and international policies towards the media. Prerequisite: CMNS 110 and 130.

CMNS 247-3 International Communication
A survey and analysis of opportunities and constraints in the field of international communication. The course will consider perspectives from which to understand and address regional differences, universal patterns of communication in international relations, and in development co-operation. Comparative and contrastive examples will be drawn from communication practices current in the Asia-Pacific region. Prerequisite: CMNS 110 and 130. Students with credit for CMNS 346 (September 1988 to August 1997) may not take this course for further credit.

CMNS 253-3 Introduction to Information Technology: The New Media
An introduction to new communication/information technologies, seen as new media of communication: the technical and social issues arising from them. Prerequisite: CMNS 110 or 130.

CMNS 253W-3 Introduction to Information Technology: The New Media
An introduction to new communication/information technologies, seen as new media of communication: the technical and social issues arising from them. Prerequisite: CMNS 110 or 130. Writing.

CMNS 258-3 Introduction to Electroacoustic Communication
An introduction to the tape medium as a communicational tool and to electroacoustic aspects of communication in general. Specific techniques of field recording, interviewing, editing, tape transformations, sound object manipulation, and basic studio techniques will be presented and students will use the school’s studio facilities. Applications of the tape medium to such areas as media analysis, aural history, social documentation, interpersonal communication, and tape music composition will be discussed.

CMNS 259-3 Acoustic Dimensions of Communication I
A course designed to develop the student's perception and understanding of sound and its behavior in the interpersonal, social, environmental, media and creative fields. The acoustic and psychoacoustic bases of sound will be introduced with special reference to acoustic design, the electroacoustic media, and sonic environments.

CMNS 260-3 Empirical Communication Research Methods
An introduction to empirical research methods in diverse traditions of communication enquiry. Some methods recognize communication as everyday interactions; others analyze communication as a process; still others blend traditional scientific empiricism with analytical and critical methods derived from the arts and humanities. Topics include: ethics, paradigms, conceptualizing and operationalizing research, sampling, interviews, surveys, unobtrusive observation, content analysis, and the role of statistics in communication research. Prerequisite: CMNS 110 or 130. Quantitative.

CMNS 261-3 Documentary Research in Communication
Media and communication studies often utilize historical research and corporate records. The course introduces the techniques necessary to analyze the primary source documents. Topics include: ethics, documentary discourse analysis, Canadian and international documentary searches on NGOs, governments, corporations; writing of policy briefs. Prerequisite: CMNS 110 or 130.

CMNS 262-3 Design and Method in Qualitative Communication Research
Examination of a wide range of approaches to research in media and cultural studies, including a discussion of ethical issues. Topics may include: historical research and work methods; textual analysis, case studies. Prerequisite: CMNS 110 or 130. Students who have credit for CMNS 286 in Spring 2004 may not take CMNS 262 for further credit.

CMNS 286-3 Selected Topics
Analysis of a particular topic in the general area of communication. Prerequisite: CMNS 110 and 130.

CMNS 287-3 Selected Topics
Analysis of a particular topic in the general area of communication. Prerequisite: CMNS 110 and 130.

CMNS 304-4 Communication in Everyday Life
An introduction to context theory and media literacy. Films and documentaries are used as texts for the study of communication and popular culture. Prerequisite: 45 credit hours including two of CMNS 220, 221, 223.

CMNS 304W-4 Communication in Everyday Life
An introduction to context theory and media literacy. Films and documentaries are used as texts for the study of communication and popular culture. Prerequisite: 45 credit hours including two of CMNS 220, 221, 223. Writing.

CMNS 310-4 Media and Modernity
An examination of the development of communication theory in western social thought from the eighteenth century to the early twentieth century. Discussion is focused around a series of debates about the changing nature of human communication in modernity with specific reference to the rise of modern mass media. Topics discussed include the so-called growth of mass society in modernity; the emergence of Marxism; the origins of modern linguistics; and the rise and reformation of behavioural approaches to communication research. Prerequisite: two of CMNS 210, 221, 240.

CMNS 320-4 Children, Media and Culture
The course examines the part played by communication media in children's lives by reviewing the debates and research in this field. Specific attention will be paid to the issues of violence, literacy, imagination, quality and marketing through an examination of the critical writing and advocacy movements which have arisen around the problem of children's media. Prerequisite: 60 credits including two of CMNS 220, 221, 223, 226. Strongly recommended: CMNS 362 or 363.

CMNS 321-4 Cultural Production of Popular Music
Examination of the cultural production of popular music with emphasis on the relationship between the nature and strategies of popular music production and the patterns of its audience consumption. Prerequisite: CMNS 221.

CMNS 323-4 Cultural Dimensions in Advertising
This course develops a critical overview of the current debates about the consumer society. This exploration of consumer culture begins by examining recent characterizations of the psycho-social dynamics of consumption in consumer culture. It goes on to trace the historical formation of advertising as a key cultural practice, and the market transactions between producers and consumers. The marketing communication model is the focus of a detailed examination of the increasingly sophisticated co-ordination of communication and consumer research activities. Prerequisite: 60 credit hours, including two of CMNS 220, 221, 223 or 226. Strongly recommended: CMNS 362 or 363.

CMNS 324-4 Media, Sports and Popular Culture
An examination of the changing relationships between media, sport and popular culture in both a North American and a global context. Prerequisite: two of CMNS 210, 220, 221, 223, 240. Cannot be taken for further credit is student has taken CMNS 386 under same title.

CMNS 326-4 Applied Media Workshop: On the Hill
This course provides an opportunity for students to build on the knowledge they have acquired in Digital Media Communication Techniques (CMNS 226), and apply that knowledge to the production of the School of Communication’s web based news magazine and documentary program On The Hill (www.sfu.ca/oth). Students will draw on their understanding of public communication in democracies and media analysis skills to create new and innovative visual and aural journalism. In addition, students will develop teamwork skills as they produce segments for the shows in groups. The course seminars will emphasize communication design, and the social and ethical issues which arise when working with documentary and news material for public dissemination. Prerequisite: permission of instructor, and 60 credit hours including CMNS 226 and 235.

CMNS 331-4 News Discourse and Political Communication
An examination of journalism and the news media as a set of institutions with important political and ideological roles. The course overview theoretical perspectives and applies selected theoretical concepts to such topics as influences on media content, how news generates meaning, ideological aspects of media frames, and the evaluation of journalism's performance in relation to normative expectations of democratic political communication. Prerequisite: two of CMNS 230, 235 and 240.

CMNS 332-4 Communication and Rhetoric
An examination of rhetoric and persuasion in the context of communication studies. Several classical accounts of persuasion and rhetoric are examined in...
order to develop a fuller understanding of the promotional ethos of the modern age. How different institutional modes of persuasive discourse have been shaped by a variety of research agendas and underlying theories about human nature is also studied. Prerequisite: 60 credit hours including two of CMNS 220, 221, or 223. Cannot repeat this course for credit if taken as CMNS 286-3 in 2003-4.

CMNS 333-4 Broadcast Policy and Regulation in the Global Context
Television as broadcast, cable and video-on-demand formats, has dominated the cultural industries of Canada. Traditionally seen as important to political and cultural self-determination, broadcasting strategy, business and government policies are now being adapted in view of globalization of technologies which are altering the production, financing, and distribution of new and existing information and entertainment services. This course focuses on developing applied business and public policy analytic skills. Tools of on-line searches, presentation software, the rudiments of strategic analysis of industrial sectors (strengths, weaknesses, threats, opportunities) and technical policy writing will be covered. A simulation will be staged around a convergence theme drawn from technologies used by business, or public interest policy issues. Prerequisite: CMNS 240 and 261. Recommended: CMNS 230.

CMNS 334-4 Cultural Policy
Examination of the modern foundations and current policy processes of federal, provincial and municipal policies for the arts, cultural industries and heritage. Related social policies, such as bilingualism and multiculturalism, and the international context of Canadian cultural policy, will also be addressed. Prerequisite: CMNS 261 and one of CMNS 230 or 240.

CMNS 336-4 Telecommunication Regulation in North America
Development of the theory and practice of regulation of the telecommunications industry in Canada and the USA. Prerequisites: CMNS 240 and 261. Recommended: CMNS 230. Students who have taken CMNS 438 in the past may not take this course for further credit.

CMNS 342-4 Science and Public Policy: Risk Communication
The course examines communication in the relation between science and public policy, and more particularly, in the evaluation of risk. Prerequisite: Two of CMNS 260, 261, 262.

CMNS 346-4 Communication and Development
An introduction to explanations and interpretations of the roles of communication in development, and the historical framework through which such analysis is made. It shows how an unequal structure of world political economy is conserved in association with the ever increasing amounts of information and new means to communicate. Examples from Canada and other countries will be used. Prerequisite: 60 credit hours including CMNS 110 and 130. Recommended: CMNS 240. Students who have taken CMNS 345 may not take CMNS 346 for further credit.

CMNS 347-4 Communication in Conflict and Intervention
The role of communication, and in particular the mass media, in various types of conflict and the uses of communication-based strategies in the intervention, arbitration and mediation of those conflicts. Prerequisite: 60 credit hours including CMNS 110 and 130. Recommended: CMNS 247 and 362.

CMNS 353-4 Social Contexts of Information Technology
Examination of a particular application of information/communication technology, focussing on the technology itself and its capabilities; how it is implemented, and what social impacts it has on the people who use it. Emphasis is placed on understanding how the system works in the ongoing social context in which it is developed, installed and used. The topics may vary from semester to semester. Prerequisite: CMNS 253; and CMNS 261 or 362.

CMNS 354-4 Communication and Social Issues in Design
This course will explore social issues and values in designing and producing, with an emphasis on the objects and processes of design. Emphasis will be placed on communication between participants in the design process, and identification of social issues and values that influence design. Students will work in cross-disciplinary teams during labs. Lab exercises will emphasize making decisions that occur during the design process explicitly, and making values that enter into design processes explicit. Prerequisite: 60 credit hours, including any one of CMNS 253; CMPT 275; KIN 201, 205 or ENSC 100. CMNS students must also have completed CMNS 362 or 363.

CMNS 358-4 Sound Tape Recording: Theory and Uses
An intermediate level studio workshop to develop the student’s skills in the tape medium and his/her understanding of the communicational implications of sound when processed in that medium. Prerequisite: CMNS 258 with a grade of B or higher, and approval of instructor.

CMNS 359-4 Acoustic Dimensions of Communication II
A special topics course and small class work group at an intermediate level in acoustic communication dealing intensively with specific problems in psychoacoustics, acoustic design, soundscape studies, noise in the community, acoustic aspects of social organization, the acoustic aspects, language and interpersonal communication, electronic sound production, media analysis, theories of sound cognition, and information processing. Prerequisite: CMNS 259.

CMNS 362-6 Evaluation Methods for Applied Communication Research
Research design and techniques for the study of the introduction, uses and consequences of new media and technologies, new communication policies and practices in their socio-economic and cultural context, and community innovation and change. Prerequisite: at least 60 credit hours, including two of CMNS 253, 260 or 261.

CMNS 363-4 Approaches to Media and Audience Research
A survey and application of research approaches to media and audience analysis including content analysis, textual analysis, agenda setting, effects research, focus group and survey research, message evaluation and audience studies. Prerequisite: at least 60 credit hours, including one of CMNS 220, 221 or 223, and CMNS 260. Quantitative.

CMNS 371-4 The Structure of the Book Publishing Industry in Canada
An analysis of the various facets of the book publishing industry in Canada including ownership patterns, legal foundations, criteria for book selection and marketing, includes examination of both commercial and educational publishing. The industry will be analyzed within the framework of Canadian cultural and other government policies affecting the industry. Prerequisite: 60 credit hours, including CMNS 110 and 130.

CMNS 372-4 The Publishing Process
Students will follow the book-publishing process from the acquisition and editing of manuscripts through to production, promotion and distribution. Each topic proceeds from basic concepts and precepts to case studies of particular kinds of publishing companies (e.g., literary, regional and general trade) and particular types of books (e.g., children’s, genre, fiction and poetry). The publishing decision-to-publish process will be simulated. Required: 60 credit hours, including the history of book publishing, as well as on current developments. Prerequisite: 60 credit hours, including CMNS 110 and 130.

CMNS 375-4 Magazine Publishing
This course addresses the basic concepts and practices used in the magazine publishing industry in the areas of business, writing, editing, design, marketing, advertising, distribution, and production. It emphasizes readership and editorial policy, new technology and changing costs and revenue patterns. Prerequisite: 60 credit hours.

CMNS 386-4 Special Topics in Communication
Intensive analysis of a particular topic in the general area of communication. Prerequisite: depends on topic, published before registration.

CMNS 387-4 Special Topics in Communication
Intensive analysis of a particular topic in the general area of communication. Prerequisite: depends on topic, published before registration.

CMNS 395-3 Communication Practicum I
First semester of work experience in the School of Communication’s Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: Students must complete Bridging Online (visit www.sfu.ca/coop/brid for further details) at least two semesters before their anticipated co-op placement. Students must then register with the co-op program by the second week of the semester preceding the work semester of application, and have a minimum GPA of 2.70. Graded as pass/fail (P/F).

CMNS 396-3 Communication Practicum II
The second semester of work experience in the School of Communication Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CMNS 395. Graded as pass/fail (P/F).

CMNS 408-4 Communication Network Project Group
An advanced workshop in network analysis focussed on applied research. Prerequisite: two upper division CMNS courses and permission of the instructor.

CMNS 409-3 Media and Ideology
An advanced seminar in mass media studies focussing upon theoretical debates about the allegedly ideological character of mass media and mass culture. Prerequisite: 75 credit hours, including CMNS 310. Recommended: CMNS 331 and SA 327. Students who have taken CMNS 422 may not take this course for further credit.

CMNS 425-4 Applied Communication for Social Issues
An advanced seminar in applied communication that focuses on the research and strategic design of media messages, campaigns and programs for public awareness, education, and social change. This course involves the application of theories and approaches in critical media analysis to the tasks of media design and media use for public understanding, engagement and participation around social issues. Prerequisite: 75 credit hours, including CMNS 221 and one of CMNS 260, 261 or 262.

CMNS 426-4 Video Design for Social Advocacy
The workshop examines the growing role that video is playing in a variety of public relations, industrial advocacy and educational contexts. The emphasis of this course is on issues of communication design in relation to the goals and values in specific communication forums. Prerequisite: 75 credit hours, including CMNS 226 and two of CMNS 220, 326, 358.
CMNS 428-4 Media Analysis Project Group
An advanced workshop in media analysis focussed on applied research. Prerequisite: two upper division CMNS courses and permission of instructor.

CMNS 431-4 News Research and Analysis
Applied research seminar using techniques of textual and content analysis to test media themes and explore patterns of coverage and omission in Canada's new media. Students also have an opportunity to publicize their work through the NewsWatch Canada Project. Prerequisite: instructor's permission, normally granted on the basis of a CGPA of at least 3.0, and 75 credit hours, including at least one of CMNS 235, 331 or 335, and at least one of CMNS 261 or 363.

CMNS 432-4 Opinion, Propaganda and Political Communication
Explores the general relationship between mediated politics and political media. The interaction of political marketing, persuasion and political advertising during and between elections is examined. Prerequisite: 75 credit hours including at least two CMNS or DIAL upper division courses. Cannot receive credit for this course if taken as CMNS 486-4 in Summer 2004-2005.

CMNS 433-4 Issues in Communication and Cultural Policy
Advanced seminar on current issues in communication policy. Topics will be selected from among current policy issues in local, national and international aspects of broadcasting, the cultural industries, the arts and heritage. Prerequisite: 75 credit hours including CMNS 333 or 334.

CMNS 435-4 Information Rights in the Information Age
An advanced seminar to examine key information policy issues and the actors involved in setting policy (governments, information industry, news media, libraries, citizen groups) in Canada, with international comparisons. Prerequisite: 75 credit hours, including CMNS 261 and one of CMNS 240, 333, 334 or 353.

CMNS 437-4 Media Democratization: From Critique to Transformation
An advanced seminar on the normative debates, social bases, and strategic potential for media democratization. In the context of economy and developed liberal democracies like Canada and the United States. This course complements other courses which critically examine state communication policies and the political economy and allegedly ideological character of corporate media. Here, we focus on campaigns and movements in civil society to define and build alternative communicative forms based on equality, democratic participation and/or human rights. Prerequisite: 75 credit hours, including CMNS 235, 240 or 331. Cannot be taken for further credit if student has taken CMNS 428 or 487 under the same title.

CMNS 438-4 Communication Policy Project Group
An advanced workshop in communication policy in media and information technology focussed on applied research. Prerequisite: two upper division CMNS courses and permission of the instructor.

CMNS 443-4 Comparative Asian Media Systems
Offers a basis for understanding different Asian media systems in concrete historical, political and socio-economic contexts. Introduces students to a range of epistemological and theoretical issues in media systems in a vast and extremely diverse region that is undergoing a period of rapid political, economic, social and cultural transformation. Provides an overview of issues relating to different media systems and case studies of media and politics in specific countries in the region. Prerequisite: 75 credit hours including one of CMNS 230 or 240, and one of CMNS 261 or 262.

CMNS 444-4 Political Economy of International Communication
An examination of the domestic and international implications of the development of mass media and telecommunications and their underpinning role in the flow of communication and information. Prerequisite: 75 credit hours, including CMNS 240, and 261 or 262.

CMNS 445-4 Media and Popular Culture in China
An exploration of the media and popular culture scene in reform-era China. A wide range of media and popular culture forms and practices (including films, television shows, lifestyle magazines, street tabloids, and popular rhymes) are analyzed in their concrete institutional settings and dynamic relationships with official ideologies, market imperatives, and the everyday struggles and cultural sensitivities of various social groups during a period of epochal transformation in China. Prerequisite: 75 credit hours including CMNS 240, and 261 or 262; and one of CMNS 310, 331, 345, or 346. Students who have taken CMNS 428, 486 or 487 with this topic may not take CMNS 445 for further credit.

CMNS 446-4 The Communication of Science and the Transfer Of Technology
Evaluation of the communication of scientific knowledge and technology, both within industrialized settings and to non-industrialized settings. Specific reference to the communication of values related to the use of technologies and the role of science and technology in international development. Prerequisite: 75 credit hours, including CMNS 345 or 346, and one of CMNS 260, 261 or 262. Recommended: CMNS 253 and 362.

CMNS 447-4 Negotiation and Dialogue as Communication
This course provides frameworks and tools with which to understand and evaluate negotiation and evaluate negotiation as a form of communication. The objective of the course is to provide an understanding of the role of communication in the negotiating process, and the consequences of different kinds of negotiation strategies in intercultural, international, competitive, and conflictual situations. It combines theoretical discussion with practical case studies, involves guest negotiators and analysts, and provides an opportunity to experience the practical importance of negotiation as a basis for clarifying relationships. Prerequisite: 75 credit hours, including CMNS 347 and 362.

CMNS 448-4 International Communication Project Group
An advanced workshop in international communication and development focussed on applied research. Prerequisite: two upper division CMNS courses and permission of the instructor.

CMNS 453-4 Issues in the Information Society
Advanced seminar to discuss issues in the interplay between contemporary society and new computer/communication technologies, at the level of comprehensive theories of society, on one hand, and major public policy, on the other. Prerequisite: 75 credit hours, including CMNS 353 and 362.

CMNS 454-4 Computer Mediated Work and Workplace Communication
An investigation of the meaning and character of jobs and workplace communication systems that involve computers. An examination of the influence of managerial goals and workplace relations on the design and choice of hardware and software for: office automation; computer and computer-integrated manufacturing systems; computer-aided design, expert systems, and electronic networks. Prerequisite: 75 credit hours including CMNS 253. Recommended: CMNS 353 and 362.

CMNS 455-4 Women and New Information Technologies
In the 1970s, technological change came under the scrutiny of a wide range of interest groups. Research conducted with women and technological change documented that women were affected differently by technology than men, and that, in general, women occupy different positions in the technological change process than men. As interest in women and technological change has grown in the past 25 years, the benefits of focusing on gender as a variable of study have extended beyond making women's experiences visible. Focusing on gender offers the possibility of discovering theoretical limitations which, when addressed, have implications that extend beyond the interests of women. Prerequisite: 75 credit hours, including any one of CMNS 253, 353, or 453; CMPT 320; WS 204.

CMNS 456-4 Communication to Mitigate Disasters
An examination of the special role communication and information systems play in efforts to mitigate effects of major emergencies and disasters. Topics include: Canadian and international disaster management programs, practices and issues; principles of emergency communication planning and operation, and the application and influence of new communication and information technologies (including electronic networks) in hazard information gathering, interpretation, exchange and management. Prerequisite: 75 credit hours, including two of CMNS 230, 240, 253, and 353.

CMNS 458-4 Information Technology Project Group
An advanced workshop in applied information technology and its evaluation focussed on applied research. Prerequisite: two upper division CMNS courses and permission of instructor.

CMNS 460-4 Seminar in Dialogue and Public Issues
Focuses on the practical tools and conceptual approaches used in dialogue, with comparisons of the role and impact of dialogue among community, government, corporate, union, First Nations, legal-regulatory, advocacy groups and organizations. Emphasis is on interaction among interest groups and stakeholders, culture of negotiation and decision-making, techniques of facilitation, and strategies for effective outcomes. Prerequisite: 75 credits including either at least two of CMNS 332, 347, 425, 432, 437, 447 or DIAL 390, 391, 392.

CMNS 461-3 Field Placement in Dialogue
Students work under faculty supervision in a placement where dialogue is planned or where dialogue occurs. Arrangements are the responsibility of the student, and enrolment is limited. Prerequisite: 75 credits including CMNS/DIAL 460, and permission of instructor.

CMNS 472-4 Books, Markets and Readers
This course will examine the major markets for the sale of books, book buying and book reading. Special emphasis will be placed on popular genres and successful authors and outlets such as independent and chain bookstores, book clubs, libraries and specialty stores. Prerequisite: 75 credit hours including CMNS 372.

CMNS 473-4 Publication Design and Print Production
An examination of theory, principles and applications in publication design and print production including computer applications. The course focuses on magazines, books and electronic formats. Creative, marketing and managerial issues will all be explored. Prerequisite: 75 credit hours.
CMNS 474-4 The Business of Publishing
This course examines business practices within publishing firms. It emphasizes financial planning and operations, acquisitions, marketing and promotion. Prerequisite: 75 credit hours including CMNS 372.

CMNS 478-4 Publishing Project Group
An advanced workshop in publishing analysis or design focused on applied research. Prerequisite: two upper division CMNS courses and permission of the instructor.

CMNS 479-1 Directed Study
Independent research and reading on topics selected in consultation with the supervising instructor. Prerequisite: two upper division CMNS courses and consent of instructor. No more than ten credits of Directed Study may be taken.

CMNS 480-2 Directed Study
Independent reading and research on topics selected in consultation with the supervising instructor. Prerequisite: two upper division CMNS courses and consent of instructor. No more than ten hours of directed study may be taken.

CMNS 481-3 Directed Study
Independent reading and research on topics selected in consultation with the supervising instructor. Prerequisite: two upper division CMNS courses and consent of instructor. No more than ten hours of directed study may be taken.

CMNS 482-4 Directed Study
Independent reading and research on topics selected in consultation with the supervising instructor. Prerequisite: two upper division CMNS courses and consent of instructor. No more than ten hours of directed study may be taken.

CMNS 483-5 Directed Study
Independent reading and research on topics selected in consultation with the supervising instructor. Prerequisite: two upper division CMNS courses and consent of instructor. No more than ten hours of directed study may be taken.

CMNS 486-487-4 Special Topics in Communication
Intensive analysis of a particular topic in communication and/or attention to the work of a particular writer or school of thought. Prerequisite: depends on topic; published before registration.

CMNS 488-4 Selected Topics in Communication
Intensive analysis of a particular topic in the general area of communication. Prerequisite: depends on topic; published before registration.

CMNS 489-4 Field Placement in Communication
For students who have at least 24 upper level credit hours in communication, this course offers the opportunity to work under faculty supervision in a field placement site related to one of the areas of concentration in communication. Arrangements for field placement and faculty supervision are the responsibility of the student, and enrollment will depend upon the availability of faculty resources in any semester. Prerequisite: 75 credit hours and permission of the school.

CMNS 493-3 Communication Practicum III
The third semester of work experience for students in the School of Communication Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CMNS 396. Graded as pass/fail (P/F).

CMNS 498-3 Communication Practicum IV
The fourth semester of work experience for students in the School of Communication Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CMNS 494. Graded as pass/fail (P/F).

CMNS 496-3 Communication Practicum V
An optional fifth semester of work experience for students in the School of Communication Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CMNS 495. Graded as pass/fail (P/F).

CMNS 497-5 Honors Research Proposal
Preparation for honors research project, including literature review, ethics approval (if necessary), and presentation of work in progress at end of semester. Prerequisite: students accepted into honors program only.

CMNS 498-10 Honors Research Project
Intensive work in a particular topic in the general field of communication. Involves an extensive individual research project under the direct supervision of at least two committee members (at least one of whom is a CMNS faculty member) who will provide guidance and critical feedback as necessary. Presentation of completed project at end of semester. Prerequisite: successful completion of CMNS 497.

CMNS 800-5 Contemporary Approaches in Communication Studies
This course surveys current interdisciplinary perspectives in communication studies and theory. It is normally offered in the fall term, and expected in the first year of graduate study.

CMNS 801-5 Design and Methodology in Communication Research
A survey course which examines the problems, methods and theoretical assumptions in communication research using case studies of research design and methods. Students may design a research project and conduct a small pilot study in a selected area. Normally offered in the spring semester and expected in the first year of graduate study.

CMNS 802-5 History of Communication Theory
A survey of classic works, issues and debates in communication theory.

CMNS 804-5 Seminar in Advanced Communication Theory
CMNS 805-5 Communication Research Methods and Techniques
Survey of research methodology and techniques used in empirical communication studies. Involves research design, measurement, and the use of the computer in evaluation.

CMNS 815-5 Social Construction of Communication Technologies
A study of the social theory of information technologies, examining issues affecting computer-mediated communication.

CMNS 830-5 Popular Culture and Media Theory
Examines recent debates in popular culture and media theory, including post-modernism, hegemony, resistance and culture at the margin.

CMNS 840-5 Political Economy of Communications
A study of the political, economic and social process that produces the structure and policies of mass media, and of telecommunications agencies in their historical setting.

CMNS 845-5 Communication, Knowledge Systems and Development
A study of communication in development, with a special emphasis on the confrontation of knowledge systems, and their expertise; international organizations and social justice; the roles of science and technology in development; the process of globalization; media and environmental sustainability. Prerequisite: one of CMNS 800, 801, 802.

CMNS 850-5 Directed Readings and Research
Pursuance of particular areas of interest related to a student's program.

CMNS 851-5 Directed Studies
Pursuance of interest in specific areas, including field studies related to the student's program. May include work and study in supervised professional settings.

CMNS 855-5 Selected Topics in Communication Studies
Specialized one-time graduate course offerings on topics related to the current research of school faculty of visiting professors.

CMNS 856-5 Graduate Seminar
Advanced work in an area of specialization. Review and evaluation of research in progress.

CMNS 857-858-5 Selected Topics in Communication Studies
Specialized graduate course offering on a topic related to the current research of school faculty or visiting professor.

CMNS 859-5 Acoustic Dimensions of Communications
Special topics in sound and communication studies with emphasis on specific problems in psycho-acoustics, theories of sound cognition and information processing, sociolinguistics, acoustic design, community noise surveys, media analysis and related technology. Students will gain experience in designing and conducting research projects in one of these areas. Prerequisite: CMNS 359 or equivalent.

CMNS 860-2 Graduate Colloquium
Discussion of essentials of researching, writing, and defending a thesis. Presentation by students of thesis related research plans or results, thesis architecture, of finished chapters for critical review by faculty and students. MA students must complete this course once before proceeding to a thesis defence. S/U standing only.

CMNS 880-5 Directed Readings and Research Supervised enquiry in concentrated areas of specialization.

CMNS 881-5 Research Internship
Work and study in an approved professional setting.

CMNS 882-5 Research Field Work
External research beyond regular contact with the University.

CMNS 881-0 Co-op Practicum I
CMNS 892-0 Co-op Practicum II
CMNS 895-6 Comprehensive Examination
Examination of three areas of which one must be on the theoretical or methodological framework/procedures indicated by the proposed dissertation. S/U standing only. The exam may be retaken once in the event of unsatisfactory performance.

CMNS 898-6 MA Thesis
CMNS 899-6 PhD Thesis

Computing Science CMPT
Faculty of Applied Sciences

CMPT 100-3 Software Packages and Programming
Introduction to the fundamentals of computer operation and computer programming. The use of software packages is emphasized, focusing on spreadsheets, databases, and presentation graphics. Techniques of solving problems using structured programs in a modern database programming environment are introduced. Prerequisite: BC mathematics 12 or MATH 100 or MATH 110. Students with credit for CMPT 101, 102, 103, 104, 120, 126 or 128 may not take CMPT 100 for further credit.
CMPT 126-3 Introduction to Scientific Computer Programming
A programming course which will provide the science student with a working knowledge of a scientific programming language and an introduction to computing concepts, structured programming, and modular design. The student will also gain knowledge in the use of programming environments including the use of numerical algorithm packages. Corequisite: MATH 152 or 155 (or 158). Students with credit for CMPT 101, 103 104, 120, 126 or 128 may not take CMPT 102 for further credit. Quantitative.

CMPT 110-3 Programming in Visual Basic
Topics will include user interfaces, objects, event-driven programming, program design, and file and data management. Prerequisite: BC mathematics 12 (or equivalent) or any 100 level MATH course. Students who have obtained credit for, or are currently enrolled in, a computing science course at the 200 level or higher, or ITEC 240, 241 or 242 may not take this course for further credit. Quantitative.

CMPT 118-3 Special Topics in Computer and Information Technology
Special topics in computer science which are of current interest or are not covered in the regular course offerings. The course will be offered from time to time depending on availability of faculty and on student interest. Students who have obtained credit for, or are currently enrolled in, a computing science course at the 200 level or higher, may not take CMPT 118 for further credit.

CMPT 120-3 Introduction to Computing Science and Programming
An elementary introduction to computing science and computer programming, suitable for students with little or no programming background. Students will learn fundamental concepts and terminology of computing science, as well as elementary skills for programming in a high-level language and be exposed to diverse fields within, and applications of, computing science. Topics will include: pseudocode, data types and control structures, fundamental algorithms, computability and complexity, computer architecture, and history of computing science. Treatment is informal and programming is presented as a problem-solving tool. Students should consult with their advisor or course instructor to ensure that the course fits their needs. Students with credit for CMPT 101, 102, 104, 125, 126, or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative/Breadth-Science.

CMPT 125-3 Introduction to Computing Science and Programming II
A rigorous introduction to computing science and computer programming, suitable for students who already have some background in computing science and programming. Intended for students who will major in computing science or a related program. Topics include: fundamental algorithms; elements of empirical and theoretical algorithms; abstract data types and elementary data structures; basic object-oriented programming and software design; computation and computability; specification and program correctness; and history of computing science. Prerequisite: BC MATH 12 (or equivalent) and CMPT 120. Students with credit for CMPT 101, 104, 126, 128 or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative/Breadth-Science.

CMPT 126-3 Introduction to Computing Science and Programming III
A rigorous introduction to computing science and computer programming, suitable for students who already have substantial programming background. This course provides a condensed version of the two-course sequence of CMPT 120/125, with the primary focus on computing science and object oriented programming. Topics include: fundamental algorithms and problem solving; abstract data types and elementary data structures; basic object-oriented programming and software design; elements of empirical and theoretical algorithms; computation and computability; specification and program correctness; and history of computing science. Prerequisite: BC MATH 12 (or equivalent). Students should feel comfortable writing programs in a structured language. Students must consult with the self-evaluation on the Computing Science web site to decide whether they should follow the CMPT 120/125 course sequence or enroll in CMPT 126. Students with credit for CMPT 101, 104, 125, 128 or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative/Breadth-Science.

CMPT 128-3 Introduction to Computing Science and Programming for Engineers
An introduction to computing science and computer programming, suitable for students wishing to major in Engineering Science or a related program. This course introduces basic computing science concepts, and fundamentals of object oriented programming. Topics include: fundamental algorithms and problem solving; abstract data types and elementary data structures; basic object-oriented programming and software design; elements of empirical and theoretical algorithms; computation and computability; specification and program correctness; and history of computing science. The course will use a programming language commonly used in Engineering Science. Prerequisite: BC MATH 12 (or equivalent). Students with credit for CMPT 101, 104, 125, 126 or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative.

CMPT 150-3 Introduction to Computer Design
Digital design concepts are presented in such a way that students will learn how basic logic blocks of a simple computer are designed. Topics covered include: basic Von Neumann computer architecture; an introduction to assembly language programming; combinational logic design; and sequential logic design. Students who have taken ENSC 150 or CMPT 290 cannot take this course for further credit. Prerequisite: MACM 101 and CMPT 128, or any 100 level MATH course. Students with credit for CMPT 101, 104, 125, 126 or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative/Breadth-Science.

CMPT 165-3 Introduction to the Internet and the World Wide Web
In this course, we shall examine the structure of the Internet and the World Wide Web as well as design and create web sites. Students who have obtained credit for, or are currently enrolled in a computing science course at the 200 level or higher, or ITEC 240, 241 or 242 may not take CMPT 165 for further credit. Students who have taken CMPT 116 may not take CMPT 165 for further credit. Breadth-Science.

CMPT 212-3 Object-Oriented Applications Design in C++
Introduction to object-oriented software design concepts, the object-oriented features of the C++ language, other advanced C++ features, plus a simple introduction to the fundamentals of graphical user interfaces and the development of windowed applications. Prerequisite: CMPT 101, 104, 125, 126 or 128. Recommended: CMPT 201 or 225.

CMPT 218-3 Special Topics in Computing Science
Special topics in computing science which are of current interest or are not covered in the regular curriculum will be offered from time to time depending on availability of faculty and on student interest. Prerequisite: CMPT 201 or 205.

CMPT 225-3 Data Structures and Programming
Introduction to a variety of practical and important data structures and methods for implementation and for experimental and analytical evaluation. Topics include: stacks, queues and linked lists; search trees; hash tables and algorithms; efficient sorting; object-oriented programming; time and space efficiency analysis; and experimental evaluation. Prerequisite: MACM 101 and one of CMPT 104, 125, 126 or 128; or CMPT 128 and approval as a Biomedical Engineering Major. Students with credit for CMPT 201 may not take this course for further credit. Quantitative.

CMPT 250-3 Introduction to Computer Architecture
This course deals with the main concepts embodied in computer hardware architecture. In particular, the organization, design and limitations of the major building blocks in modern computers is covered in detail. Topics will include: processor organization; control logic design; memory systems; and architectural support for operating systems and program languages. A hardware description language will be used as a tool to express and work with design concepts. Prerequisite: CMPT 128, or IAT 165. Students with credit for CMPT 290 or 105 with permission of instructor. This course is identical to ENSC 250 and students cannot take both courses for credit. Students who have taken CMPT 390 may not take CMPT 250 for further credit. Quantitative.

CMPT 261-3 Spatial Computing
An exploration of the major concepts of analytical and computational geometry and an introduction to tools for programming geometric information and displaying the results. Students completing this course will have a basic understanding of how computer graphics systems work; skills in writing programs to display geometric information for graphics display; ability to solve geometric problems using transformations, geometric representations and the basic algorithms of computational geometry; and familiarity with various common mathematical notation for representing spatial objects. Prerequisite: CMPT 125, MATH 232. Students with credit for ITEC 271, 272, and 273 may not take this course for further credit. CMPT 261 and IAT 261 are identical courses; at most one may be taken for credit.

CMPT 265-3 Multimedia Programming for Art and Design
Using cases from topics such as animation, cinema, music and design, this course introduces a variety of programming tools and techniques. Practical use of multimedia scripting languages and authoring environments is covered in the context of a series of composition and design projects. Code libraries and programming techniques for specific media will be introduced. Assessment is based on both programming and the expressive use of programs in their case context. Prerequisite: CMPT 120 (or equivalent first programming course). Students with credit for IART 206, 207 and 208 may not take this course for further credit. CMPT 265 and IAT 265 are identical courses; at most one may be taken for credit.

CMPT 267-3 Introduction to Technological Systems
Introduction to the core technologies and systems used in media-rich interactive environments, including computer hardware, operating systems, input and output technologies, networking and media. The concepts will be examined by working in a high-level media programming environment. This course is equivalent to IAT 267; students with credit for IAT 267 may not take this course for further credit. Students who have obtained credit for, or are currently enrolled in, a computing science course at the 300 division or
CMPT 310-3 Artificial Intelligence Survey
Provides a unified discussion of the fundamental approaches to the problems in artificial intelligence. The topics considered are: representational typology and search methods; game playing, heuristic programming; pattern recognition and classification; theorem-proving; question-answering systems; natural language understanding; computer vision. Prerequisite: CMPT 201 or 225. MacM 201.

CMPT 318-3 Special Topics in Computing Science
Special topics in computing science at the 300 level. Topics that are of current interest or are not covered in regular curricula will be offered from time to time. Depending on availability of faculty and student interest. Prerequisite: CMPT 201 or 225.

CMPT 320-3 Social Implications – Computerized Society
An examination of social processes that are being automated and implications for good and evil, that may be entailed in the automation of procedures by which goods and services are allocated. Examination of what are dehumanizing and humanizing parts of society and how systems can be designed to have a humanizing effect. Prerequisite: a course in computing science and 45 credit hours. Students with credit for CMPT 260 may not take CMPT 320 for further credit. Breadth-Science.

CMPT 340-3 Computers in Biomedicine
The principles involved in using computers for data acquisition, real-time processing, pattern recognition and experimental control in biology and medicine will be developed. The use of large data bases and simulation will be explored. Prerequisite: completion of 60 credits including CMPT 101, 125, 126 or 128 (or 102 or 104 with a grade of B or higher).

CMPT 354-3 Database Systems I
Logical representations of data records. Data models. Studies of some popular file and database systems. Document retrieval. Other related issues such as database administration, data dictionary and security. Prerequisite: CMPT 201 or 225, MACM 101.

CMPT 361-3 Introduction to Computer Graphics
This course provides an introduction to the fundamentals of computer graphics. Topics include graphics display and interaction hardware, basic algorithms for 2D primitives, anti-aliasing, 2D and 3D geometrical transformations, 3D projections/viewing, Polygonal and hierarchical models, hidden-surface removal, basic rendering techniques (color, shading, raytracing, radiosity), and interaction techniques. Prerequisite: CMPT 201 or 225 and CMPT 232. Students with credit for CMPT 351 may not take CMPT 361 for further credit.

CMPT 363-3 User Interface Design
This course provides a comprehensive study of user interface design. Topics include: goals and principles of UI design (systems engineering and human factors), historical perspective, current paradigms (widget-based, mental model, graphic design, ergonomics, metaphor, constructivist/iterative approach, and visual languages) and their evaluation, existing tools and methods of UI design, UI in event-based systems, prototyping, future paradigms, and the social impact of UI. Prerequisite: CMPT 201 or 225.

CMPT 365-3 Multimedia Systems
Multimedia systems design, multimedia hardware and software, issues in effectively representing, processing, and retrieving multimedia data such as text, graphics, sound and music, image and video. Prerequisite: completion of 60 credits including CMPT 201 or 225.

CMPT 388-3 Introduction to Computer Music and Sound Synthesis
An introduction to the fundamentals of digital audio, computer music, basic sound synthesis algorithms, and digital audio effects and processing. Topics include concepts of sound and digital audio representation, basic concepts of digital filtering, fundamentals of spectrum analysis, and sound synthesis techniques. Understanding of theoretical concepts will be consolidated through practical programming assignments in Matlab, however there will also be exposure to various freeware real-time software, audio programming and sound editing environments. Prerequisite: MATH 152 and one of CMPT 125, 126 or 128 (or permission of instructor).

CMPT 370-3 Information System Design
This course focuses on the computer-related problems of information system design and procedures of design implementation. Well-established design methodologies will be discussed, and case studies will be used to illustrate various techniques of system design. Prerequisite: CMPT 275 and 354.

CMPT 371-3 Data Communications and Networking
Introduction to communication fundamentals (data types, rates, and transmission media). Network architectures for local and wide areas. Communications protocols suitable for various architectures. ISO protocols and internetworking. Performance analysis under various loadings and channel error rates. Prerequisite: CMPT 201 or 225, CMPT/ENSC 150 and MATH 152. MATH 155 or 158 with a grade of at least B+ may be substituted for MATH 152.

CMPT 376-3 Technical Writing and Group Dynamics
Covers professional writing in computing science, including format conventions and technical reports. Examines group dynamics, including team leadership, dispute resolution and collaborative writing. Also covers research methods. Prerequisite: Any lower-division W course. Co-requisite: CMPT 275.

CMPT 376W-3 Technical Writing and Group Dynamics
Covers professional writing in computing science, including format conventions and technical reports. Examines group dynamics, including team leadership, dispute resolution and collaborative writing. Also covers research methods. Prerequisite: Any lower-division W course. Co-requisite: CMPT 275. Writing.

CMPT 379-3 Principles of Compiler Design
This course covers the key components of a compiler for a high level programming language. Topics include lexical analysis, parsing, type checking, code generation and optimization. Students will work in teams to design and implement an actual compiler making use of tools such as lex and yacc. Prerequisite: MACM 201. CMPT 150 and 201 or 225.

CMPT 383-3 Comparative Programming Languages
Various concepts and principles underlying the design and use of modern programming languages are considered in the context of procedural, object-oriented, functional and logic programming languages. Topics include data and control structuring constructs, facilities for modularity and data abstraction, polymorphism, syntax, and formal semantics. Prerequisite: CMPT 201 or 225, MACM 101.

CMPT 384-3 Symbolic Computing
This course considers modelling and programming techniques appropriate for symbolic data domains such as mathematical expressions, logical formulas, grammars and programming languages. Topics include recursive and functional programming, style grammar-based data abstraction, simplification and reduction transformations, conversions to canonical form, environment data structures and interpreters, metaprogramming, pattern matching and theorem proving. Prerequisite: CMPT 201 or 225, MACM 101.

CMPT 401-3 Operating Systems II
This second course on operating systems studies in depth some of the issues introduced in CMPT 300, as well as new, more advanced topics in modern operating systems. Topics may include interprocess communication, threads, remote procedure calls, language constructs for concurrency, deadlocks, virtual machines, distributed systems, distributed concurrency control, group communication, issues in
file system design, security and protection, performance evaluation. Prerequisite: CMPT 300 and 371.

**CMPT 405-3 Design and Analysis of Computing Algorithms**
Models of computation, methods of algorithm design; complexity of algorithms on graphs, NP-completeness, approximation algorithms, selected topics. Prerequisite: CMPT 307.

**CMPT 406-3 Computational Geometry**
Mathematical preliminaries; convex hull algorithms; intersection problems; closest-point problems and their applications. Prerequisite: CMPT 307.

**CMPT 407-3 Computational Complexity**
Machine models and their equivalences, complexity classes, separation theorems, reductions, Cook's theorem, NP-completeness, the polynomial time hierarchy, boolean circuit models and parallel complexity theory, other topics of interest to the students and instructor. Prerequisite: CMPT 307.

**CMPT 408-3 Theory of Computing Networks/Communications**
Network design parameters and goals, dynamic networks and permutations, routing in direct networks, structured communication in direct networks, other topics of interest to the students and instructor. Prerequisite: CMPT 307 and 371.

**CMPT 409-3 Special Topics in Theoretical Computing Science**
Current topics in theoretical computing science depending on faculty and student interest. Prerequisite: CMPT 307.

**CMPT 411-3 Knowledge Representation**
Formal and foundational issues dealing with the representation of knowledge in artificial intelligence systems are covered. Questions of semantics, incompleteness, non-monotonicity and others will be examined. As well, particular approaches, such as procedural or semantic network, may be discussed. Prerequisite: completion of nine credit hours in Computing Science upper division courses or, in exceptional cases, permission of the instructor.

**CMPT 412-3 Computational Vision**
Computational approaches to image understanding will be discussed in relation to theories about the operation of the human visual system and with respect to practical applications in robotics. Topics will include edge detection, shape from shading, stereo, contour, texture, Fourier methods, gradient space, three-dimensional object representation and constraint satisfaction. Prerequisite: MATH 152, and nine credit hours in Computing upper division courses or permission of the instructor.

**CMPT 413-3 Computational Linguistics**
This course examines the theoretical and applied problems of constructing and modelling systems, which aim to extract and represent the meaning of natural language sentences or of whole discourses, but drawing on contributions from the fields of linguistics, cognitive psychology, artificial intelligence and computing science. Prerequisite: completion of nine credit hours in Computing Science upper division courses or, in exceptional cases, permission of the instructor.

**CMPT 414-3 Model-Based Computer Vision**
This course covers various topics in computer vision with the emphasis on the model-based approach. Main subjects include 2-D and 3-D representations, matching, constraint relaxation, model-based vision systems. State-of-the-art robot vision systems will be used extensively as study cases. The solid modelling and CAD aspects of this course should also interest students of computer graphics. Prerequisite: MATH 152 and nine credit hours in CMPT upper division courses, or permission of the instructor.

**CMPT 415-416-3 Special Research Projects**
To be individually arranged.

**CMPT 417-3 Intelligent Systems**
Intelligent Systems using modern constraint programming and heuristic search methods. A survey of this rapidly advancing technology as applied to scheduling, design and configuration. An introduction to constraint programming, heuristic search, constructive (backtrack) search, iterative improvement (local) search, mixed-initiative systems and combinatorial optimization. Prerequisite: CMPT 201 or 225.

**CMPT 418-3 Computational Cognitive Architecture**
Computationally-oriented theories of human cognitive architecture are explored, beginning with neurologically inspired (neural network) models of "low-level" brain processes, and progressing upwards to higher-level symbolic processing, of the kind that occurs in rule-following and problem solving. Arguments concerning the need for modular processing and combinatorially adequate forms of mental representation are examined at length. Prerequisite: CMPT 201 or 225. Recommended: CMPT 310.

**CMPT 419-3 Special Topics in Artificial Intelligence**
Current topics in artificial intelligence depending on faculty and student interest. Prerequisite: CMPT 310 or permission of the instructor.

**CMPT 426-3 Practicum I**
The first semester of work experience in the School of Computing Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: Students must complete Bridging Online (visit www.sfu.ca/coop/bol for further details) at least two semesters before their anticipated co-op placement. Prerequisites: Students must then register with the co-op program by the second week of the semester preceding the work semester. Normally, students will have completed a minimum of 45 credit hours by the end of the semester of application, CMPT 275S and have a minimum CGPA of 2.70. Graded as pass/fail (P/F).

**CMPT 427-3 Practicum II**
The second semester of work experience for students in the Computing Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Graded as pass/fail (P/F).

**CMPT 428-3 Practicum III**
The third semester of work experience for students in the Computing Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Graded as pass/fail (P/F).

**CMPT 429-3 Practicum IV**
The fourth semester of work experience for students in the Computing Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Graded as pass/fail (P/F).

**CMPT 430-3 Practicum V**
An optional fifth semester of work experience for students in the Computing Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: CMPT 429, CGPA of 2.70. Graded as pass/fail (P/F).

**CMPT 441-3 Computational Biology**
This course introduces students to the computing science principles underlying computational biology.

The emphasis is on the design, analysis and implementation of computational techniques. Possible topics include algorithms for sequence alignment, database searching, gene finding, phylogeny and structure analysis. Prerequisite: CMPT 307. Students with credit for CMPT 341 may not take this course for further credit.

**CMPT 454-3 Database Systems II**
An advanced course on database systems which covers crash recovery, concurrency control, transaction processing, distributed database systems as the core material and a set of selected topics based on the new developments and research interests, such as object-oriented data models and systems, extended relational systems, deductive database systems, and security and integrity. Prerequisite: CMPT 300 and 354.

**CMPT 456-3 Information Retrieval and Web Search**
Introduction to the essentials of information retrieval and the applications of information retrieval in web search and web information systems. Topics include the major models of information retrieval, similarity search, text content search, link structures and web graphics, web mining and applications, crawling, search engines, and some advanced topics such as spam detection, online advertisement, and fraud detection in online auctions. Prerequisite: CMPT 354.

**CMPT 459-3 Special Topics in Database Systems**
Current topics in database and information systems depending on faculty and student interest. Prerequisite: CMPT 354

**CMPT 461-3 Image Synthesis**
Covers advanced topics and techniques in computer graphics with a focus on image synthesis. Topics include photorealistic rendering, advanced ray tracing, Monte Carlo methods, photon maps, radiosity, light fields, participating media, as well as tone reproduction. Prerequisite: CMPT 361, MACM 220 and 316. Students with credit for CMPT 451 may not take CMPT 461 for further credit.

**CMPT 464-3 Geometric Modeling in Computer Graphics**
Covers advanced topics in geometric modelling and programming for computer graphics such as B-spline and NURBS techniques, subdivision curves and surfaces, solid modeling, implicit representation, surface reconstruction, multi-resolution modeling, digital geometry processing (e.g. mesh smoothing, compression, and parameterization), point-based representation, and procedural modeling. Prerequisite: CMPT 361, MACM 316. Students with credit for CMPT 469 between 2003 and 2007 or equivalent may not take CMPT 464 for further credit.

**CMPT 466-3 Animation**
Topics and techniques in animation, including: The history of animation, computers in animation, traditional animation approaches, and computer animation techniques such as geometric modelling, interpolation, camera controls, kinematics, dynamics, constraint-based animation, realistic motion, temporal aliasing, digital effects and post-production. Prerequisite: CMPT 361 and MACM 316 or permission of the instructor.

**CMPT 467-3 Visualization**
Presents advanced topics in the field of scientific and information visualization ranging from computer graphics and the introduction to visualization (importance, basic approaches, and existing tools), abstract visualization concepts, human perception, visualization methodology, data representation, 2D and 3D display, interactive visualization, and their use in medical, scientific, and business applications. Prerequisite: CMPT 361, MACM 316.
CMPT 469-3 Special Topics in Computer Graphics
Current topics in computer graphics depending on faculty and student interest. Prerequisite: CMPT 361.

CMPT 470-3 Web-based Information Systems
This course examines: two-tier/multi-tier client/server architecture; superstructure of a Web-based information system; web servers/browser; programming/scripting tools for clients and servers; database access; transport of programming objects; messaging systems; security; and applications (such as e-commerce and on-line learning). Prerequisite: CMPT 354 and 371.

CMPT 471-3 Networking II
This course covers the fundamentals of higher level network functionality such as remote procedure/object calls, name/address resolution, network file systems, network security and high speed connectivity/bridging/switching. Prerequisite: CMPT 300 and 371.

CMPT 475-3 Software Engineering II
Students will study in-depth the techniques, tools and standards needed in the management of software development. Topics will include software process and quality standards, life cycle models, requirements specification issues, project estimation, planning and tracking, project management tools, team dynamics and management, configuration and change management techniques and tools, metrics, quality assurance and test techniques, professional and legal issues. Prerequisite: CMPT 275 and 15 semester hours of upper division courses. Recommended: co-op experience.

CMPT 477-3 Introduction to Formal Verification
Introduces, at an accessible level, a formal framework for symbolic model checking, one of the most important verification methods. The techniques are illustrated with examples of verification of reactive systems and communication protocols. Students learn to work with a model checking tool. Prerequisite: CMPT 275.

CMPT 479-3 Special Topics in Computing Systems
Current topics in computing systems depending on faculty and student interest. Prerequisite: CMPT 401.

CMPT 481-3 Functional Programming
The fundamental concepts of programming will be examined in the context of a modern functional language such as Haskell. Topics will include lazy evaluation and infinite data structures, higher order functions, pattern matching, program transformation and verification, and polymorphic types. Prerequisite: CMPT 383.

CMPT 487-3 Software Engineering Tools and Environments
The design and construction of software engineering tools and environments is examined as well as the effects of their use in the software life cycle. Topics include design tools, language-based editors, tools for measurement, analysis, testing and documentation, program transformation and manipulation systems, configuration and version control tools, and software development and maintenance environments. Prerequisite: CMPT 275, 383 and 384.

CMPT 489-3 Special Topics in Programming Language
Current topics in programming languages depending on faculty and student interest. Prerequisite: CMPT 383.

CMPT 496-3 Directed Studies
Independent study in topics selected in consultation with the supervising instructor(s) that are not covered by existing course offerings. Students must submit a proposal to the undergraduate chair, including the name and signature of the supervising faculty member(s). The proposal must include details of the material to be covered and the work to be submitted. Prerequisite: students must have completed 90 credit hours, including 15 credit hours of upper division CMPT courses, and have a GPA of at least 3.00. The proposal must be submitted to the Undergraduate Chair at least 15 days in advance of the semester. The proposal must be signed by the supervisor(s) and the undergraduate chair.

CMPT 497-6 Dual Degree Program Capstone Project
Student will select one project to be completed in their final year of study. Each student must complete a project report and make a project presentation. The project may include: a research survey, a project implementation, a research paper/report. Prerequisite: Students must be in their final year of the Dual Degree Program.

CMPT 498-6 Honors Research Project
Students must submit a proposal to the Undergraduate Chair, including the name and signature of the supervising faculty member(s). Students must complete a project report and make a project presentation. This course can satisfy the research project requirements for Computing Science honors students. Prerequisite: Students must have completed 90 credit hours, including 15 credits of upper division CMPT courses, and have a GPA of at least 3.00. The proposal must be submitted to the Undergraduate Chair at least 15 days in advance of the semester. The proposal must be signed by the supervisor(s) and the Undergraduate Chair.

CMPT 499-3 Special Topics in Computer Hardware
Current topics in computer hardware depending on faculty and student interest. Prerequisite: CMPT/ENSC 250 or CMPT 390.

CMPT 505-3 Problem Based Learning in Bioinformatics
The problem based learning course will develop students' ability to exchange ideas in small groups focused on real but simplified problems in bioinformatics. Problems will be carefully selected to cover all aspects of bioinformatics research. Prerequisites: Enrolled in Graduate Diploma in Bioinformatics. This course is identical to MBB 505 and students can not take both courses for credit.

CMPT 506-3 Critical Research Analysis
Advanced seminar series for bioinformatics. Prerequisites: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to MBB 506 and students can not receive credit for both courses.

CMPT 611-6 Research Rotation I
One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisites: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to MBB 612 and students can not take both courses for credit.

CMPT 612-6 Research Rotation II
One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisites: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to MBB 612 and students can not receive credit for both courses.

CMPT 613-6 Research Rotation III
One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisites: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to MBB 613 and student can not receive credit for both courses.

CMPT 701-3 Computability and Logic
Deep connections between logic and computation have been evident since early work in both areas. More recently, logic-based methods have led to important progress in diverse areas of computing science. This course will provide a foundation in logic and computability suitable for students who wish to understand the application of logic in various areas of CS, or as preparation for more advanced study in logic or theoretical CS.

CMPT 705-3 Design and Analysis of Algorithms
The objective of this course is to expose students to basic techniques in algorithm design and analysis. Topics will include greedy algorithms, dynamic programming, advanced data structures, network flows, randomized algorithms.

CMPT 706-3 Parallel Algorithms
The fundamentals of the design and analysis of parallel algorithms. Topics will include introduction of parallel models (like PRAM, networks), communication models, systolic algorithms, parallel complexity theory, geometric algorithms.

CMPT 710-3 Computational Complexity
This course provides a broad view of theoretical computing science with an emphasis on complexity theory. Topics will include a review of formal models of computation, language classes, and basic complexity theory; design and analysis of efficient algorithms; survey of structural complexity including complexity hierarchies, NP-completeness, and oracles; approximation techniques for discrete problems.

CMPT 720-3 Artificial Intelligence
Artificial Intelligence brings concepts such as computation, process, sub-procedure, data structure, and debugging to bear upon questions traditionally raised by psychologists, linguists, and philosophers. In this course we will study a representative sample of work in the field. This will include programs which process written English, ‘see’, play games, prove theorems, and solve problems.

CMPT 721-3 Introduction to Knowledge Representation and Reasoning
Knowledge representation is the area of Artificial Intelligence concerned with how knowledge can be represented symbolically and manipulated by reasoning programs. This course addresses problems dealing with the design of languages for representing knowledge, the formal representation of these languages and the design of computational...
mechanisms for making inferences. Since much of Artificial Intelligence requires the specification of a large body of domain-specific knowledge, this area lies at the core of AI. Prerequisites: CMPT 310/710 recommended. Cross-listed with CMPT 411.

CMPT 725-3 Logical Methods in Computational Intelligence
Provides an overview and in-depth introduction on several new developments in computational logic for intelligent systems. In particular, we shall cover three areas of strategic importance: natural language processing, abductive logic programming and constraint-based logic programming. The purpose is to introduce graduate students to the frontiers of computational logic research and applications. Students of various backgrounds, such as Linguistics and Cognitive Sciences, are most welcome. Some of the course will proceed in seminar style. Students should be prepared to read and present papers and to participate in discussions.

CMPT 730-3 Foundations of Programming Languages
This course will cover basic concepts in the area of programming languages. The course will be largely of a theoretical nature and will concentrate on fundamental concepts of lasting importance, rather than topics of current interest.

CMPT 731-3 Functional Programming
This course will cover functional programming including introduction to a functional programming language, program transformation and verification, implementation of functional programming languages, and other selected topics which may include parallel evaluation of functional programs, analysis of performance, and advanced applications. Students who have taken CMPT 831 may not take this course for further credit.

CMPT 740-3 Database Systems
Introduction to advanced database system concepts, including query processing, transaction processing, distributed and heterogeneous databases, object-oriented and object-relational databases, data mining and data warehousing, spatial and multimedia systems and Internet information systems.

CMPT 741-3 Foundations of Data Mining
The students will learn basic concepts and techniques of data mining. Unlike data management required in traditional database applications, data analysis aims to extract useful patterns, trends and knowledge from raw data for decision support. Such information are implicit in the data and must be mined to be useful.

CMPT 745-3 Software Engineering
This course examines fundamental principles of software engineering and state-of-the-art techniques for improving the quality of software designs. With an emphasis on methodological aspects and mathematical foundations, the specification, design and test of concurrent and reactive systems is addressed in depth. Students learn how to use formal techniques as a practical tool for the analysis and validation of key system properties in early design stages. Application on high level design of distributed and embedded systems.

CMPT 750-3 Computer Architecture
Parallel processing: SIMD & MIMD systems, pipelining, data flow architecture; micro programming; control memory minimization, optimization and verification of compilers.

CMPT 755-3 Compiler Theory
Precedence, LL(k), LR(k) grammars; SLR(k), LALR(k), L(m)R(k) parsing techniques; translation grammars; general compiler organization, code generation and optimization; memory allocation for object programs; garbage collection. Students who have taken CMPT 830 may not take this course for further credit.

CMPT 760-3 Operating Systems
This course will discuss design issues relating to the functionality and performance of modern workstation operating systems, such as methods for sharing memory, file and device control, and choice of communication protocols. The special needs of high performance multiprocessor systems and real time systems will also be addressed.

CMPT 761-3 Image Synthesis
Advanced topics and techniques in computer graphics and image synthesis are covered. Topics include photorealistic rendering, advanced ray tracing, Monte Carlo methods, photon maps, radiosity, light fields, participating media, as well as tone reproduction. Students with credit for CMPT 461, CMPT 770, or equivalent may not take CMPT 761 for further credit.

CMPT 764-3 Geometric Modeling in Computer Graphics
Advanced topics in geometric modeling and processing for computer graphics, such as Bezier and B-spline techniques, subdivision curves and surfaces, solid modeling, implicit representation, surface reconstruction, multi-resolution modeling, digital geometry processing (e.g., mesh smoothing, compression, and parameterization), point-based representation, and procedural modeling. Prerequisite: CMPT 361, MACM 316. Students with credit for CMPT 464 or equivalent may not take CMPT 764 for further credit.

CMPT 765-3 Computer Communication Network
This course will cover the fundamentals and recent advances in computer communication networks. The emphasis will be on the design and analysis of networks, especially switching, routing, and network topology.

CMPT 767-3 Visualization
Advanced topics in the field of scientific and information visualization are presented. Topics may include: an introduction to visualization (importance, basic approaches and existing tools), abstract visualization concepts, human perception, visualization methodology, 2D and 3D display and interaction and their use in medical, scientific, digital geometry processing, and virtual modeling. Prerequisite: CMPT 316, 461 or equivalent (by permission of instructor). Students who have taken CMPT 878 or 775 may not take this course for further credit.

CMPT 771-3 Internet Architecture and Protocols
Investigates the design and operation of the global network of networks: the Internet. This course studies the structure of the Internet and the TCP/IP protocol suit that enables it to scale to millions of hosts. The focus is on design principles, performance modeling, and services offered by the Internet.

CMPT 773-3 User Interface Design
This course provides an overview of a number of research areas in human-computer interaction. Topics may include: overview of HCI (historical/Intellectual, GUI, case study systems (design, evaluation, software development), interaction methods (vision, graphic design, touch, speech, etc.,), human factors (information processing, capabilities), research frontiers (computer supported co-operative work, intelligent systems, hyperhert, multimedia, virtual reality, cyberspace). Recommended: CMPT 363 or equivalent (instructor discretion). Students who have taken CMPT 873 may not take this course for further credit.

CMPT 777-3 Introduction to Formal Verification
The goal of formal verification is to prove correctness or to find mistakes in software and other systems. This course introduces, at an accessible level, a formal framework for symbolic model checking, one of the most important verification methods. The techniques are illustrated with examples of verification of reactive systems and communication protocols. Students learn to work with a model checking tool such as NuSMV.

CMPT 813-3 Computational Geometry
This course covers recent developments in discrete, combinatorial, and algorithmic geometry. Emphasis is placed on both developing general geometric techniques and solving specific problems. Open problems and applications will be discussed.

CMPT 814-3 Algorithmic Graph Theory
Algorithm design often stresses universal approaches for general problem instances. If the instances possess a special structure, more efficient algorithms are possible. This course will examine graphs and networks with special structure, such as chordal, interval, and permutation graphs, which allows the development of efficient algorithms for hard computational problems.

CMPT 815-3 Algorithms of Optimization
This course will cover a variety of optimization models, that naturally arise in the area of management science and operations research, which can be formulated as mathematical programming problems.

CMPT 816-3 Theory of Communication Networks
This course investigates the design, classification, modeling, analysis, and efficient use of communication networks such as telephone networks, interconnection networks in parallel processing systems, and special-purpose networks.

CMPT 817-3 Knowledge Bases with Visual and Natural Language
This course examines recent significant advances in knowledge bases, focusing in particular on knowledge representation, reasoning, and integration of knowledge bases with friendly front ends such as visual and natural language interfaces. It is expected that students who complete this course gain sufficient background to begin research projects at the master's or doctoral levels in the topics covered. Students from computing science, mathematics, linguistics, education, philosophy, psychology, cognitive science and engineering science are especially encouraged to register for this course.

CMPT 820-3 Multimedia Systems
This seminar course covers current research in the field of multimedia computing. Topics include multimedia data representation, compression, retrieval, network communications and multimedia systems. Computing science graduate student or permission of instructor.

CMPT 821-3 Robot Vision
This course discusses issues and research results pertinent to robot vision. Topics include depth recovery for robot navigation, three dimensional object recognition and scene analysis, model-based approaches, parallel vision machines and algorithms, and case studies of contemporary robot vision systems.

CMPT 822-3 Computational Vision
A seminar based on the artificial intelligence approach to vision. Computational vision has the goal of discovering the algorithms and heuristics which allow a two dimensional array of light intensities to be interpreted as a three dimensional scene. By reading and discussing research papers — starting with the original work on the analysis of line drawings, and ending with the most recent work in the field — participants begin to develop a general overview of computational vision, and an understanding of the current research problems.
CMPT 823-3 Formal Topics – Knowledge Representation
This course surveys current research in formal aspects of knowledge representation. Topics covered in the course will centre on various features and characteristics of encodings of knowledge, including incomplete knowledge, non monotonic reasoning, inexact and imprecise reasoning, meta-reasoning, etc. Suggested preparation: a course in formal logic and a previous course in artificial intelligence.

CMPT 825-3 Natural Language Processing
In this course, theoretical and applied issues related to the development of natural language processing systems and specific applications are examined. Investigations into parsing issues, different computational linguistic formalisms, natural language syntax, semantics, and discourse related phenomena will be considered and an actual natural language processor will be developed.

CMPT 826-3 Automated Learning and Reasoning
This course covers topics shared by AI and cognitive science. Current AI research papers are examined from the perspective of cognitive science, and vice versa. Topics covered in a given semester will vary, depending upon the instructor, but most of the following topics will be addressed in any given semester: connectionist models of intelligence; 'human-like' automated deduction; reasoning by analogy; topics in natural language; automated concept learning; and computational approaches to semantics. Prerequisites: at least one graduate or undergraduate AI course, or instructor’s permission.

CMPT 827-3 Intelligent Systems
Intelligent systems are knowledge-based computer programs which emulate the reasoning abilities of human experts. This introductory course will analyse the underlying artificial intelligence methodology and survey work in the area of knowledge based systems, constraint solving, incremental reasoning, intelligent backtracking and heuristic local search methods. We will look specifically at research applications in intelligent scheduling, configuration and planning. The course is intended for graduate students with a reasonable background in symbolic programming.

CMPT 829-6 Special Topics in Bioinformatics
Examination of recent literature and problems in bioinformatics. Within the CIHR graduate bioinformatics training program, this course will be offered alternatively as the problem-based learning course and the advanced graduate seminar in bioinformatics (both concurrent with MBB 829). Prerequisite: permission of the instructor.

CMPT 842-3 Concurrency Control in Database Systems
Transactions, recoverability, serializability theory, schedulers, locking, timestamping, optimistic schedulers, multiversion database systems; recovery, commit protocols, termination protocols; replicated database systems, quorum based concurrency control; distributed snapshot taking, distributed deadlock detection, reliable storage systems; concurrency control in object oriented database systems.

CMPT 843-3 Database and Knowledge-base Systems
An advanced course on database systems which focuses on data mining and data warehousing, including their principles, designs, implementations, and applications. It may cover some additional topics on advanced database system concepts, including deductive and object-oriented database systems, spatial and multimedia databases, and database-oriented Web technology.

CMPT 852-3 LSI Systems Design
This course links two fields that traditionally have been considered two separate entities: computer architecture and integrated circuit design. The vehicle used to demonstrate the intersection of layout issues and architectural concepts is metal oxide semiconductor technology.

CMPT 853-3 Computer-Aided Design/Design Automation for Digital Systems
Algorithms for logic synthesis and physical CAD/DA: Emphasis on routing, placement, partitioning, and gate level logic synthesis.

CMPT 880-3 Special Topics in Computing Science
This course aims to give students experience to emerging important areas of computing science. Prerequisite: instructor discretion.

CMPT 881-3 Special Topics in Theoretical Computing Science
CMPT 882-3 Special Topics in Artificial Intelligence
CMPT 884-3 Special Topics in Database Systems
CMPT 885-3 Special Topics in Computer Architecture
CMPT 886-3 Special Topics in Operating Systems
CMPT 887-3 Special Topics in Hardware Design
CMPT 888-3 Special Topics in Computer Graphics
This course introduces graduate students to specialized topics in computer graphics. In most cases, such topics will build upon those discussed in previous graphics classes, or of prime interest to faculty (such as current research topics).

CMPT 889-3 Special Topics in Interdisciplinary Computing
CMPT 891-3 Advanced Seminar I
Grade given: S (satisfactory) or U (unsatisfactory).

CMPT 894-3 Directed Reading
CMPT 897-6 MSc Project
CMPT 898-6 MSc Thesis
CMPT 899-6 PhD Thesis
CMPT XX1-3 Computers and the Activity of People
Concerned with computer literacy and appreciation. What are computers? What do they do? How do they do it? How will they affect us? Illustrations given of applications of computing in the arts, commerce, industry, science and everyday activity. Programming is introduced but not emphasized; instead, students will be exposed to a variety of computer hardware and software elements that are in wide use. No special prerequisite. Students with a grade of B or higher in BC high school computer science 12, or those who have obtained credit for or are currently enrolled in any other Computing Science course may not take CMPT 001 for further credit.

Contemporary Arts FPA
Faculty of Arts and Social Sciences
FPA 104-3 Music Fundamentals
This course is designed to provide a basic understanding of the elements of music and teaches the skill of reading music notation. An introduction to music theory and exposure to the application of music materials in a wide spectrum of music literature will be accompanied by practical exercises. The course is designed for students with no formal music training. May be of particular interest to students in other departments.

FPA 111-3 Issues in Fine and Performing Arts
This course introduces students to some basic issues in the fine and performing arts through the presentation and discussion of selected works in dance, film, music, theatre, and visual art. It is designed to give students who intend further study in one or more of these arts some familiarity with critical issues affecting all of them. It is a recommended preparation for the school's upper division history and critical courses. May be of particular interest to students in other departments. Breadth-Humanities.

FPA 120-3 Introduction to Contemporary Dance
Development of movement skills through fundamentals of contemporary dance technique, explorations in improvisation, and short composition studies. An introduction to dance literature will focus on selected topics. May be of particular interest to students in other departments.

FPA 122-4 Contemporary Dance I
First of two studio courses in contemporary dance and ballet technique. Introduces theoretical approaches to contemporary dance. This is one of four courses required for entry into the dance major and minor programs. Prerequisite: prior approval as a result of an audition. Corequisite: FPA 122 and FPA 129 must be taken concurrently.

FPA 124-3 Contemporary Dance II
Continues and expands on the work undertaken in FPA 122. Emphasizes work in contemporary dance and ballet technique with attention to theoretical approaches to contemporary dance. Prerequisite: FPA 122. Corequisite: FPA 123 and FPA 124 must be taken concurrently.

FPA 124-3 Dance Improvisation
Selected dance improvisational skills will be explored in a variety of solo, duet, small group and large group forms through structured movement themes. Emphasis will be on sensory awareness, elements of movement, and literal and abstract imagistic stimuli. (studio) This is one of four courses required for entry into the BFA dance major and extended minor. Recommended: dance or theatre experience.

FPA 129-3 Fundamental Integration of Human Movement
This studio/theory course incorporates techniques of body awareness, centering, and structural realignment. The emphasis is on body conditioning and body connectedness. This course will be of interest to dancers, actors, kinesiologists, and athletes. This is one of four courses required for entry into the dance major and extended minor program.

FPA 130-4 Fundamentals of Film
Introduces students to the basic components of filmmaking through lectures, film screenings and creative projects in the various media that combine to form cinema. Prerequisite: prior approval through formal application. Students who have taken FPA 132, 133, 134 or 230 may not take FPA 130 for further credit. A laboratory fee is required. Students should be advised that course activities may require additional costs.

FPA 131-4 Filmmaking I
An introductory course in 16 mm. film production, emphasizing creative use of the medium. Each student is expected to conceive, direct and edit a short film with a non-synchronous sound track, as well as participate in the making of class exercises and other students' films. Prerequisites: FPA 130 and prior approval. A laboratory fee is required. Students should be advised that film production will probably incur significant costs in addition to lab fees. Students who completed FPA 230 The Crafts of Film I in spring 1990 or earlier may not take this course for further credit.

FPA 111-3 Issues in Fine and Performing Arts
This course introduces students to some basic issues in the fine and performing arts through the presentation and discussion of selected works in dance, film, music, theatre, and visual art. It is designed to give students who intend further study in one or more of these arts some familiarity with critical issues affecting all of them. It is a recommended preparation for the school's upper division history and critical courses. May be of particular interest to students in other departments. Breadth-Humanities.

FPA 120-3 Introduction to Contemporary Dance
Development of movement skills through fundamentals of contemporary dance technique, explorations in improvisation, and short composition studies. An introduction to dance literature will focus on selected topics. May be of particular interest to students in other departments.

FPA 122-4 Contemporary Dance I
First of two studio courses in contemporary dance and ballet technique. Introduces theoretical approaches to contemporary dance. This is one of four courses required for entry into the dance major and minor programs. Prerequisite: prior approval as a result of an audition. Corequisite: FPA 122 and FPA 129 must be taken concurrently.

FPA 124-3 Contemporary Dance II
Continues and expands on the work undertaken in FPA 122. Emphasizes work in contemporary dance and ballet technique with attention to theoretical approaches to contemporary dance. Prerequisite: FPA 122. Corequisite: FPA 123 and FPA 124 must be taken concurrently.

FPA 124-3 Dance Improvisation
Selected dance improvisational skills will be explored in a variety of solo, duet, small group and large group forms through structured movement themes. Emphasis will be on sensory awareness, elements of movement, and literal and abstract imagistic stimuli. (studio) This is one of four courses required for entry into the BFA dance major and extended minor. Recommended: dance or theatre experience.

FPA 129-3 Fundamental Integration of Human Movement
This studio/theory course incorporates techniques of body awareness, centering, and structural realignment. The emphasis is on body conditioning and body connectedness. This course will be of interest to dancers, actors, kinesiologists, and athletes. This is one of four courses required for entry into the dance major and extended minor program.

FPA 130-4 Fundamentals of Film
Introduces students to the basic components of filmmaking through lectures, film screenings and creative projects in the various media that combine to form cinema. Prerequisite: prior approval through formal application. Students who have taken FPA 132, 133, 134 or 230 may not take FPA 130 for further credit. A laboratory fee is required. Students should be advised that course activities may require additional costs.

FPA 131-4 Filmmaking I
An introductory course in 16 mm. film production, emphasizing creative use of the medium. Each student is expected to conceive, direct and edit a short film with a non-synchronous sound track, as well as participate in the making of class exercises and other students' films. Prerequisites: FPA 130 and prior approval. A laboratory fee is required. Students should be advised that film production will probably incur significant costs in addition to lab fees. Students who completed FPA 230 The Crafts of Film I in spring 1990 or earlier may not take this course for further credit.

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FPA 135-3 Introduction to Cinema
An introductory course designed to facilitate a fundamental understanding of film technique, style and form in order to develop the skills with which to analyze films of all genres. Through lectures and screenings it will provide an overview of the social, aesthetic and technical development of motion pictures, introducing tools for the formal analysis of the elements of cinema: cinematography and lighting, art direction, performance, editing, sound and the screenplay. The formal and historical elements of documentary, avant-garde and dramatic films will be addressed. The course will involve the screening and discussion of several complete feature films and shorts, as well as excerpts from others.

FPA 136-3 The History and Aesthetics of Cinema I
This course will examine the early development of cinema from 1890 until about 1945, with particular emphasis on the fundamental principles of film as an art form. A substantial number of films will be shown during laboratory sessions. Students with credit for FPA 236 offered in 1982/83 and prior years may not take this course for further credit. May be of particular interest to students in other departments.

Breadth-Humanities.

FPA 137-3 The History and Aesthetics of Cinema II
This course will examine selected developments in cinema from 1945 to the present, with attention to various styles of artistic expression in film. A substantial number of films will be shown during laboratory sessions. Students with credit for FPA 237 offered in 1982/83 and prior years may not take FPA 137 for further credit. May be of particular interest to students in other departments.

Breadth-Humanities.

FPA 140-3 Music after 1900
An introductory survey of major historical trends and practices of music in the 20th and 21st centuries as revealed by the study of selected music examples. Critical issues fundamental to an understanding of contemporary composition will be examined (e.g. impressionism, twelve-tone music, indeterminacy, the role of technology, improvisation). Prerequisite: FPA 104. May be of particular interest to students in other departments.

Breadth-Humanities.

FPA 145-3 Introduction to Music Composition and Theory
This course introduces basic concepts of music composition such as melody and pitch organization, harmony, rhythm and form. The fundamental principles of theory and acoustics (e.g. voice-leading, overtone structure, metre) will be studied with particular reference to composition. Students will compose short works within given guidelines that address specific compositional issues.

Prerequisite: FPA 104.

FPA 147-3 Introduction to Electroacoustic Music
An introduction to the application of electroacoustic technology to music, including the concepts of the audio signal, signal processing and sound synthesis in their musical applications. The techniques of tape music, electronic music and computer music composition will be introduced and their role in both studio composition and live performance will be discussed. Practical experience in several of these areas is included in the lab component.

Breadth-Humanities.

FPA 150-3 Introduction to Acting I
An approach to the elements of acting based on improvisation, with an introduction to working from established texts. Focus will be placed on the development of the actor’s instrument. The work will include the development of individual powers of expression — vocally, physically, intellectually, imaginatively, and emotionally. May be of particular interest to students in other departments.

FPA 151-3 Introduction to Acting II
Expands the work of Acting I with an increased emphasis on text, leading to scene work.

Prerequisite: FPA 150. Students who have completed FPA 152 may not take this course for further credit. May be of particular interest to students in other departments.

FPA 160-3 Introductory Studio in Visual Art I
A hands-on studio course modeled on the progressive development of artistic practice from simple mark-making to full scale installation. Through a process of continuous transformation, an original idea is developed in a sequence of methods, materials and scales. Some research is required. A course materials fee is required.

FPA 161-3 Introductory Studio in Visual Art II
A continuation of the work begun in FPA 160, with emphasis on particular problems in the visual arts worked through a series of projects, culminating in the Campus Project, a site-specific public work designed, built and installed at the end of the semester. Some research is required. Prerequisite: FPA 160. A course materials fee is required. May be of particular interest to students in other departments.

FPA 167-3 Visual Art and Culture I
An introduction to the visual arts of the nineteenth century. Formal and thematic approaches to the arts will be introduced, with attention to the social, institutional, national, and international contexts of art.

Breadth-Humanities.

FPA 168-3 Visual Art and Culture II
A study of the visual arts from the twentieth century to the present, with attention to the artists, artworks, movements, and discourses that re-defined the functions and meanings of art. The debates of modernism, postmodernism, postcolonialism, feminism, and the avant-garde will be systematically explored.

Breadth-Humanities.

FPA 170-3 Introduction to Production Technology
An introduction to the processes, tools and technology used in the production and presentation of the fine and performing arts. Course requirements will include hands-on assignments in the production of theatre, dance, and music events. Students will work directly with equipment, and are expected to be involved in work on productions and exhibitions outside of lecture and lab hours.

Lab fee required. May be of particular interest to students in other areas and departments.

FPA 171-3 Introduction to Stage and Production Management
An introduction to the management, and organization of the performing arts. This course will provide a grounding for students who wish to become further involved in the administration of the performing arts and may include practical experience outside of regular seminar hours. May be of particular interest to students in other areas and departments. Students who have received credit for FPA 171 STT Intro to Stage and Production Mgmt may not take FPA 171 for further credit.

FPA 210-3 Artworks, Theories, Contexts
Introduces theoretical concepts and historical issues that have informed the creation, perception, interpretation, and analysis of selected artworks in formative epochs, such as the Renaissance, Romanticism, Modernism, or Postmodernism.

Prerequisite: 24 credit hours including six in the history or theory of the fine or performing arts. Students with credit for FPA 211 Introduction to Contemporary Theory in the Arts cannot take this course for further credit.

FPA 215-4 Contemporary Dance III
The first studio course in a series designed for students pursuing a major or extended minor in dance. Emphasizes work in contemporary dance and expands on the development of technical facility in movement and acquaint the student with form and style in contemporary dance.

Prerequisite: FPA 122, 123, 124, 129 and prior approval by interview.

FPA 221-4 Contemporary Dance IV
The second studio course in a series designed for students pursuing a major or extended minor in dance. Expands on the work undertaken in FPA 220-4 Contemporary Dance III and aims to develop technical facility in movement and acquaint the student with form and style in contemporary dance.

Prerequisite: FPA 220.

FPA 224-3 Dance Composition I
Study in the craft of dance composition emphasizing specific problems in space, time, dynamics, structure and imagery. Students will perform compositions for critical analysis and participate in the rehearsal and performance of their colleagues’ compositions.

Prerequisite: FPA 122, 123, 124 and 129 and interview.

FPA 227-3 History of Dance: From the 20th Century to the Present
Study of the development of modern dance and the reformation of the ballet from the beginning of the 20th century to the present. Emphasis will be placed on seminal dance artists and the impact their work has had upon the art form in western theatre dance.

Students with credit for FPA 328 may not take this course for further credit. Recommended: FPA 127.

May be of particular interest to students in other departments.

FPA 228W-3 Dance Aesthetics
An introduction to aesthetic theory as it applies to dance. Lectures will address, among other things, the nature of aesthetic experience, as well as issues pertaining to critical judgment, communication, taste, and high and low art.

Prerequisite: students who completed selected topics course FPA 229 in fall 2005 or fall 2006 may not take this course for further credit.

FPA 229-3 Selected Topics in Dance I
A specific topic in dance which is not otherwise covered in depth in regular courses. The work will be practical, theoretical, or a combination of the two, depending on the particular topic in a given semester.

Prerequisite: FPA 220 or prior approval. Writing.

FPA 230-5 Filmmaking II
The first of two courses. (FPA 231-5 is the second) which form an intensive study of the craft of sync-sound 16 mm. filmmaking, with an emphasis on production planning, creative development and the shooting and editing of short films.

Prerequisite: FPA 210-4 or 137 and prior approval. Students should be advised that film production will probably incur significant costs in addition to lab fees. Students who have taken FPA 330 for credit may not take FPA 230 for further credit.

Corequisite: FPA 233. A laboratory fee is required.

FPA 231-5 Filmmaking III
This course continues the work begun in FPA 230-5 Filmmaking II. Students will acquire proficiency in film technique through lab exercises, readings and film screenings. As well, all students will participate in the completion of short original sync-sound 16 mm. films which were begun in FPA 230. Emphasis is placed on the development of means for creative expression supported by technical skills.

Prerequisite: FPA 230, 233 and laboratory fee required. Students should be
advised that film production will probably incur significant costs in addition to lab fees.

FPA 232-3 Film Sound
Through lectures, demonstrations and studio work, students will be introduced to several aspects of location sound recording and audio post production for film and video. Topics will include synchronization systems and techniques, editing, music scoring, mixing and both analog and digital sound technology. Prerequisite: FPA 131 or 147 and prior approval. Students who have completed FPA 330 may not take FPA 232 for further credit. Recommended: CMNS 258.

FPA 233-2 The Techniques of Film
This course covers the technical aspects of basic 16 mm. production skills: camera, lighting, sound, editing, lab processes. These skills are taught as discrete units of instruction, with lab exercises and exams at the end of each unit. Prerequisite: FPA 131 and prior approval. Laboratory fee required. This course is not a duplicate of FPA 233 Video Production. Corequisite: FPA 230.

FPA 235-3 Experimental Film and Video
A survey of the works and ideas that have informed contemporary moving image art practice nationally and internationally. Beginning with antecedents in painting and photography, the course will move forward from the early European avant-garde to the lyrical and structural works of the seventies, the issue-based work of the eighties, and finally the gallery-based practices of the present day. Intended for all students with an interest in the moving image as an art form. Prerequisite: One of FPA 135, 136, 137, 167 or 168 or 30 credit hours.

FPA 236-3 Cinema in Canada
Examines the achievements of dramatic, documentary and experimental filmmaking in Canada from the earliest days until the present. Special attention will be paid to the cinemas of Quebec and western Canada, and to the cultural, political and theoretical traditions that have shaped contemporary cinema in Canada. Prerequisite: FPA 136 or 137, or 30 credit hours. May be of particular interest to students in other departments. Breadth-Humanities.

FPA 237-3 Selected Topics in Film and Video Studies
This course will cover a specific topic within the field of film and video studies not covered in depth in regularly scheduled courses, such as: a national cinema; film and politics; Quebec cinema; documentary and video, etc. Weekly sessions. The course may be repeated for credit if a different topic is taught. Prerequisite: FPA 136 or 137. Breadth-Humanities.

FPA 238-3 Screenwriting I
This course introduces the methodologies of writing for the screen in various styles, including dramatic, documentary and experimental forms, with an emphasis on structure and the creative expression of visual ideas. Students will perform a variety of writing assignments and each will be expected to complete one or more original scripts. Prerequisite: one of FPA 136, 137 or 253 and prior approval. Students who have taken FPA 332 for credit may not take FPA 238 for further credit.

FPA 240-3 Contemporary Music Performance I
Performance of works from the contemporary music repertoire for instruments and voice. A range of material will be covered from more improvisational pieces to conventionally notated scores. Prerequisite: audition/interview.

FPA 243-3 Gamelan I
Practical and theoretical study of music for gamelan ensemble, based on, but not limited to, traditional Javanese music. This course is designed as an introduction to the study of the music of non-Western cultures and as a method of developing ensemble musicianship. Prerequisite: prior approval. May be of particular interest to students in other departments.

FPA 244-3 Theory of Contemporary Music
The theoretical investigation of the basic materials of the tempered chromatic scale, alternative tuning systems, and contemporary practices of texture and rhythm. Analysis of a wide range of music, score-reading and exposure to recorded music will be part of the course. Prerequisite: FPA 140 and 145.

FPA 245-3 Music Composition I
Composition for small instrumental groups, electroacoustic music, or combinations of instruments and electronics. Students are also encouraged to do work involving collaboration with dance, film, theatre and visual art. In addition to individual composition lessons, students will be required to attend a composition seminar where the practice of composition will be discussed. Seminar topics will include orchestration, world repertoire, and issues of music technology. Prerequisite: FPA 145 and prior approval.

FPA 246-3 Music Composition II
This course is a continuation of FPA 245. Prerequisite: FPA 140, 245 and prior approval from the area.

FPA 247-3 Electroacoustic Music I
The theory and practice of electroacoustic music technology and composition. In addition to expanding upon the issues introduced in FPA 147, the course will examine through lecture and studio work the following topics: analog and digital synthesis, microcomputer use, the multi-track studio, signal processing, communication protocols such as MIDI and sampling techniques. Prerequisite: FPA 147. Quantitative.

FPA 248-3 Conducting I
Introduces basic elements of conducting technique including metrical patterns, quality of beat, cueing, score preparation, rehearsal technique, showing expression and dynamics, and score reading. The course is primarily designed for composers or prospective music teachers. Students will gain regular practical experience through conducting ensembles comprised of members of the class. Prerequisite: FPA 245 or prior approval. Students who have received credit for FPA 249-3 Selected Topics in Music I: Conducting I may not receive further credit for FPA 248.

FPA 249-3 Selected Topics in Music I
A specific topic in music which is not otherwise covered in depth in regularly scheduled courses. The works may be practical, theoretical or a combination of the two, depending on the particular topic in a given semester. Prerequisite: FPA 140 and/or prior approval.

FPA 250-3 Acting I
Begins the concentrated work of training the actor in both the freedom and the control of voice and body. This is accomplished through: work on the self as a source of personal imagery and as a potential wellspring of characters, work with other actors in ensemble relationships, work on text as a blueprint for expression, scene study as a vehicle for the realization of the specific dramatic content and overall shape of a play. Prerequisite: prior to registration in this course, the student must pass a successful audition. Corequisite: FPA 254.

FPA 251-3 Acting II
Continues and expands upon the work undertaken in Acting I. Prerequisite: FPA 250 and 254. Corequisite: FPA 255.

FPA 252-3 Playmaking I
Introduces elements of playmaking such as self scripting, mask exploration, clowning and political theatre. The objective is to enable students to make their own theatre. Prerequisite: admission to FPA 250 or prior approval. Laboratory fee required.

FPA 253-3 Playmaking II
Expands the work undertaken in Playmaking I emphasizing writing skills and story structure. Prerequisite: FPA 150 and prior approval.

FPA 254-2 Theatre Laboratory I
This is the first of four courses in performance research, each of which is 'attached' to one of the four courses: FPA 250, 251, 350 and 351. The work comprises voice and speech training. Prerequisite: prior approval. Corequisite: FPA 250 and 129.

FPA 255-3 Theatre Laboratory II
This is the second of four courses in performance research. The work comprises voice and speech training. Prerequisite: FPA 250 and 254. Corequisite: FPA 251.

FPA 257-3 Context of Theatre I
A conceptual approach to a selected body of dramatic work focussing on the detailed structural analysis of dramatic texts, their historical, aesthetic and development and production histories. Particular emphasis will be placed upon the evolving relationship between theatre and its audience. May be of particular interest to students in other departments.

FPA 260-3 Studio in Visual Art I
This course permits students to work extensively in a mature critical studio environment on a combination of freely chosen and assigned projects in various contemporary media. Reading will be required. Prerequisite: FPA 111, 161, 168 and prior approval. A course materials fee is required.

FPA 261-3 Studio in Visual Art II
Continues work done in FPA 260-3. Work will combine freely chosen and assigned projects in a variety of contemporary media. Readings will be required as an integral part of studio work. Prerequisite: FPA 260 and status as an approved visual art major. A course materials fee is required.

FPA 262-3 Methods and Concepts: Drawing-based Practices
A studio course introducing drawing practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 262 or 362, but not both.

FPA 263-3 Methods and Concepts: Painting-based Practices
A studio course introducing painting practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 263 or 363, but not both.

FPA 264-3 Methods and Concepts: Sculptural Practices
A studio course introducing sculptural practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 264 or 364 and students may not take both courses for credit. A course materials fee is required.

FPA 265-3 Methods and Concepts: Photo-based Practices
A studio course introducing photographic practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 265 or 365, but not both.
FPA 268-3 Methods and Concepts: Spatial Presentation
A studio course introducing spatial presentation practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 or 170. A course materials fee is required. Students can only receive credit for one of FPA 163, 268 or 368.

FPA 269-3 Methods and Concepts: Selected Topics
A studio course introducing topics in art-making practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. This course may be taken more than once for credit under a different topic. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required.

FPA 270-3 Production Ensemble I
Students having a basic familiarity with elements of production and design participate in an in-depth theoretical and practical exploration of stage management, staging, audio and lighting for theatre, dance and music production. Students in this class will develop skills necessary to provide technical support for the School's productions. May be of particular interest to students in other departments. Prerequisite: FPA 170 or 171 or prior permission.

FPA 271-3 Production Ensemble II
Students having a basic familiarity with elements of production and design participate in an in-depth theoretical and practical exploration of stage management, staging, audio and lighting for theatre, dance and music production. Students in this class will develop skills necessary to provide technical support for the School's productions. May be of particular interest to students in other departments. Prerequisite: FPA 170 or FPA 171 or prior permission.

FPA 272-3 Production Practicum I
Provides students with the opportunity to learn and practise the technical and management skills and to take on the roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Required of all second year production and design majors and extended minors. Fall semester only. Prerequisite: FPA 170 or FPA 171 and prior approval. Corequisite: FPA 270 Production Ensemble I.

FPA 273-3 Production Practicum II
Provides students with the opportunity to learn and practise the technical and management skills and to take on the roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Required of all second year production and design majors and extended minors. Spring semester only. Prerequisite: FPA 170 or 171 or FPA 171 (with STT in title) and prior approval. Corequisite: FPA 271-3 Production Ensemble II.

FPA 289-3 Selected Topics in the Fine and Performing Arts
A specific topic in fine and performing arts which is not otherwise covered in depth in regular courses and which is not appropriately placed within a single arts discipline. The work will be practical, theoretical, or a combination of the two, depending on the particular topic in a given semester. Prerequisite: will vary according to the topic. May be of particular interest to students in other departments.

FPA 290-3 Video Production I
This course will give students grounding in technical aspects of video production. The course will be organized around a series of labs and demonstrations that will give students an opportunity to gain hands-on experience in video production and post production. It is expected that individuals will complete this course with sufficient technical training to be able to apply this information successfully to their own artistic pursuits. Prerequisite: six hours credit in FPA and prior approval. Students who have taken FPA 233 Video Production for credit may not take FPA 290 for further credit. Laboratory fee required.

FPA 310-4 Interdisciplinary Methods
An examination of interdisciplinary methods that have been used to research the fine and performing arts. The course is an in-depth study of approaches to interdisciplinary research, including perceptual concerns, theoretical directions, contextual issues, and analytical processes. Prerequisite: FPA 210 and two of FPA 167, 168, 136, 137. Students who have taken FPA 310-5 prior to 1999-2 may take this course for further credit.

FPA 311-4 Interdisciplinary Studies in the Arts
An historical, theoretical or thematic topic in the fine and performing arts presenting an in-depth investigation of interdisciplinary approaches to the study of art and culture. Prerequisite: 45 credit hours including six credits in history or theory courses within the School for the Contemporary Arts. The course may be repeated when different topics are offered. Recommended: FPA 210.

FPA 312-3 Intermediate Seminar in Art and Culture
Investigates a selected thematic topic in art and culture studies, for example, postcolonial theatre and the arts; perception and embodiment; art activism and resistance; or urban art and culture. Prerequisite: will vary according to the topic. Students who have taken FPA 312-5 prior to 1999-2 may take this course for further credit.

FPA 313-5 Arts, Audience, Patronage, Institutions
An investigation of the fine and performing arts, their audiences, patronage and institutions in a specific historical context. Students will gain an in-depth understanding of a selection of art works and their relationship to their specific cultural context. Prerequisite: 45 credit hours which must include six credit hours in the history or theory of the fine or performing arts. The course may be repeated when different topics are offered. Students who have completed FPA 313 prior to 1998 may take this course for further credit only if the topic differs from the former course. Recommended: FPA 210.

FPA 314-3 Readings in the History of Art and Culture
Investigates a selected historical topic in art and culture. Prerequisite: will vary according to the topic. Students who have taken FPA 314-5 prior to 1999-2 may take this course for further credit.

FPA 319W-3 Critical Writing in the Arts
Examines aspects of critical writing associated with the fine and performing arts and encourages students to participate as writers in the artistic and cultural debates of their day. Forms examined will include but not be limited to reviews, articles, descriptive synopses for exhibition and festival programs, curatorial essays, project proposals and artists' statements. Prerequisite: 60 credit hours including at least six credit hours in FPA history/theory courses. Writing.

FPA 320-4 Contemporary Dance V
The first of four upper division courses which build upon the movement vocabulary of contemporary dance. Prerequisite: FPA 221.

FPA 321-4 Contemporary Dance VI
Continues and expands upon the work undertaken in FPA 320. Prerequisite: FPA 320.

FPA 322-3 Ballet I
Explores the vocabulary and movement range of classical ballet technique at the intermediate level. Further attention will be given to the understanding of body placement, balance, flexibility and strength. Practical studio experience is offered within the context of specific theoretical principles. Prerequisite: acceptance into the dance major or extended minor program, or prior approval.

FPA 323-3 Ballet II
Continuation of FPA 322, with an emphasis on expanding the vocabulary and movement range of classical ballet technique at the intermediate level. Further attention will be given to the understanding of body placement, balance, flexibility and strength. Practical studio experience is offered within the context of specific theoretical principles. Prerequisite: FPA 322, or prior approval.

FPA 324-3 New Dance Composition
Students will be introduced to traditional choreographic structures and explore new directions in composition. Emphasis will be on the creation and analysis of work generated by extending the parameters of source, style and form in contemporary dance. Prerequisite: FPA 124, plus one of 224, 230, 240, 245, 252, 253 or 260.

FPA 325-3 Special Project in Dance Composition
A specific topic or set of ideas will form the basis for choreographic exploration. Students will create one or more works and participate in research and critical analysis, depending on the particular topic in a given semester. Prerequisite: 40 credits in FPA courses.

FPA 326-4 Repertory I
One of two courses which provide advanced level dance students the opportunity to work as an ensemble rehearsing and preparing for a series of public performances. Choreography will be created and/or selected by a faculty director. Prerequisite: acceptance into the dance major or extended minor and prior approval. Corequisite: students must be concurrently enrolled in a technique course at an appropriate level.

FPA 327-4 Repertory II
One of two courses which provide advanced level dance students with the opportunity to work as an ensemble rehearsing and preparing for a series of public performances. Choreography will be created and/or selected by a faculty director. Prerequisite: acceptance into the dance major or extended minor and prior approval. Corequisite: students must be concurrently enrolled in a technique course at an appropriate level.

FPA 329-3 Selected Topics in Dance II
A specific topic in dance which is not otherwise covered in depth in regular courses. The work will be practical, theoretical or a combination of the two, depending on the particular topic in a given semester. Prerequisite: FPA 221 or prior approval.

FPA 332-3 Film Production Seminar
Facilitates an in-depth understanding of the organizational aspects of film production, with emphasis on pre-production planning. The class will study methods of proposal writing, pre-production and production, developing production packages for short film and video projects. This course is strongly recommended for all students intending to take FPA 430. Prerequisite: FPA 231 or prior approval.

FPA 333-3 Cinematography and Lighting
This course emphasizes advanced 16 mm. production skills in cinematography and lighting. Students are expected to participate in intensive camera exercises, as well as to play significant crew roles on fourth year films. Prerequisite: FPA 231 and prior approval. Students who have taken FPA 331 The Crafts of Film III may not take this course for further credit. Laboratory fee required.

FPA 335-4 Introduction to Film Theory
This course is concerned with the systematic understanding of the general phenomenon called
Cinema rather than with the properties or techniques of individual films. Various theoretical positions will be assessed and compared in terms of cinematic practice and its ideological functions. Prerequisite: six credits from among FPA 136, 137, 211, 236, 237. Students who have taken FPA 234 for credit may not take FPA 335 for further credit. Recommended: FPA 210. May be of particular interest to students in other departments.

FPA 337-3 Intermediate Selected Topics in Film and Video Studies
An intermediate course in critical studies, addressing a variety of topics under this number; for instance, specific genre or area studies (comedy, film noir, science fiction, etc.); national cinemas; film analysis; Third World film, video art, experimental film, etc. The course may be taken again for credit if the topic changes. Prerequisite: will vary according to subject matter. Students who have taken FPA 339 Selected Topics in Film for credit may not take the same topic under FPA 337 for further credit.

FPA 338-3 Screenwriting II
This course will present advanced theory and techniques for writing dramatic, experimental and documentary film and video scripts. Additional topics covered include script analysis, production breakdown, and the writing of treatments and proposals. Prerequisite: one of FPA 238 or 353 or 457 and prior approval. Recommended: strongly recommended for all students developing projects for production in FPA 430.

FPA 339-3 Directing and Acting for Film and Video
This course acquaints intermediate level students in film, video and theatre with techniques of dramatic film performance. Students will be expected to perform as both actors and directors on scene work in class. Topics covered include auditioning, script analysis, rehearsal, blocking, blocking, the use of the camera, and directing techniques. Prerequisite: FPA 131 or 151 and prior approval. Students who have completed Directing and Acting for Film as FPA 379 in spring 1990 or earlier, may not take this course for further credit. This course is not a duplicate of FPA 339 Selected Topics in Film, available in summer 1990 and earlier.

FPA 340-3 Contemporary Music Performance II
A continuation of FPA 240. Prerequisite: FPA 240.

FPA 341-3 World Music
The relationship of music and culture, with emphasis on traditional and contemporary music in Asia, Africa, the Middle East, Latin America and the Caribbean, and indigenous cultures of North America. Specific cultural areas may be selected for intensive study in any particular semester. Prerequisite: 45 credit hours. May be of particular interest to students in other departments.

FPA 343-3 Gamelan II
Continuation of FPA 243, with increased emphasis on the theoretical and ethnomusicological aspects of gamelan. Prerequisite: FPA 243.

FPA 344-3 Contemporary Music Analysis and Criticism
An in-depth investigation of selected social, critical and theoretical issues associated with contemporary music, with special emphasis on the period c. 1945 to the present. Issues discussed might include such theoretical concerns as integral serialism; indeterminacy; process music; timbral concerns; or new approaches to melody, harmony and tonality. Critical topics such as music and technology; popular music and the mass media; or critical issues connected with world music, may also be considered. The material of the course will be presented through the study of scores, recorded examples and when possible, live concerts. Prerequisite: FPA 244.

FPA 345-3 Music Composition III
This course is a continuation of FPA 246. Prerequisite: FPA 246 or 247, and prior approval.

FPA 346-3 Music Composition IV
This course is a continuation of FPA 345. Prerequisite: FPA 345.

FPA 347-3 Electroacoustic Music II
An advanced examination of the aesthetics, technology, and compositional approaches of electroacoustic music. Topics may include computer music programming, performance systems, compositional strategies and their relationship to technology, synthesis and processing techniques and the analysis of works. Prerequisite: FPA 247. Students with credit for FPA 347 under its former title may take this course for further credit.

FPA 348-3 Conducting II
Continuation of FPA 248, with an increased emphasis on more advanced conducting projects. Prerequisite: FPA 248 or FPA 249-3 Selected Topics in Music I: Conducting I. Students who have received credit for FPA 349-3 Selected Topics in Music II: Conducting II may not receive further credit for FPA 348.

FPA 349-3 Selected Topics in Music II
A specific topic in music which is otherwise covered in depth in regular courses. The work may be practical, theoretical or a combination of the two, depending on the particular topic in a given semester. (Studio) Prerequisite: FPA 245 and/or prior approval. (Prerequisite may vary according to the topic.)

FPA 350-3 Acting III
Continues and expands work undertaken in FPA 250 and 251, with an increased emphasis on work with established texts. Prerequisite: FPA 251 and 255. Corequisite: FPA 354.

FPA 351-3 Acting IV
Continues and expands on the work undertaken in Acting III. Prerequisite: FPA 350 and 354. Corequisite: FPA 355.

FPA 352-3 Playmaking III
Continues the development of playmaking research through intensive studio work consisting of the construction of a major dramatic text. Provides the basis for a public presentation in the subsequent semester. Prerequisite: FPA 251 and 255.

FPA 353-3 Playmaking IV
Black Box Theatre. Students will continue playmaking research through the creation of an ensemble season in a series of public presentations. Prerequisite: second year standing in a studio discipline and prior approval.

FPA 354-2 Theatre Laboratory III
This is the third of four courses in performance research comprising voice and speech training. Prerequisite: FPA 251, 255. Corequisite: FPA 350.

FPA 355-2 Theatre Laboratory IV
This is the fourth of four courses in performance research, comprising voice and speech training. Prerequisite: FPA 350, 354. Co-requisite: FPA 351.

FPA 357-3 Context of Theatre II
A conceptual approach to a selected body of dramatic work. The detailed structural analysis of dramatic texts, their historical context, their development and production histories. Particular emphasis will be placed upon the evolving relationship between theatre and its audience. Prerequisite: 24 lower division credit hours or prior approval. May be of particular interest to students in other departments.

FPA 359-3 Selected Topics in Theatre II
A specific topic in theatre which is not otherwise covered in depth in regular courses. The work may be practical, theoretical or a combination of the two, depending on the particular topic in a given semester. Prerequisite: FPA 250 and/or prior approval.

FPA 360-3 Studio in Visual Art III
An open critical studio course. Students are required to have a program of work prepared at the beginning of the semester. This program will constitute the basis of the student's work in the course, and will be the subject of continuing critical discussion. This discussion will be integrated with theoretical studies in the parallel seminar course, FPA 366. Those students who have satisfactorily completed the lower division requirements for the major may apply for entry into the third year studio seminar stream. Admission is by portfolio assessment and course achievement review in the spring semester before third year. Prerequisite: FPA 167, 168, 210, and prior approval. A course materials fee is required. Corequisite: FPA 366.

FPA 361-3 Studio in Visual Art IV
An open critical studio course. It will continue and extend work done in FPA 360. Students are required to have a program of work prepared at the beginning of the semester. This program will form the basis of the student's work in the course, and will be the subject of continuing critical discussion. This discussion will be integrated with theoretical studies in the parallel seminar course, FPA 367. Prerequisite: FPA 360 and 366. Corequisite: FPA 367. A course materials fee is required.

FPA 362-3 Methods and Concepts: Drawing-based Practices
Presents drawing practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Additional assignments will be required for students taking the course at this level. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 262 or 362, but not both.

FPA 363-3 Methods and Concepts: Painting Practices
Presents painting practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Additional assignments will be required for students taking the course at this level. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 263 or 363, but not both.

FPA 364-3 Methods and Concepts: Sculptural Practices
Presents sculptural practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Additional assignments will be required for students taking the course at this level. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 264 or 364, but not both.

FPA 365-3 Methods and Concepts: Photo-based Practices
Presents photo-based practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Additional assignments will be required for students taking the course at this level. Prerequisite: FPA 161 and status as an approved major or extended minor in visual art. A course materials fee is required. Students will receive credit for either FPA 265 or 365, but not both.

FPA 366-3 Seminar in Visual Art I
A seminar course to be taken by all students in FPA 360. It deals with visual topics of an historical, critical and theoretical nature which concern practising artists in the contemporary context. Students will be required to present research papers.
Each research subject will be studied in connection with the student's own artistic work. Senior students in other disciplines with appropriate background may request approval to take this course. Those students who have satisfactorily completed the lower division requirements for the major may apply for entry into the third year studio/seminar stream. Admission is by portfolio assessment and course achievement review in the spring semester before third year. Prerequisite: FPA 167, 168, 210, and prior approval. Corequisite: FPA 360.

**FPA 360-3 Seminar in Visual Art II**
A seminar course to be taken by all students in FPA 361. It deals with visual arts topics of an historical, critical and theoretical nature which concern practising artists in the contemporary context. Students will be required to present research papers. Each research subject will be studied in connection with the student's own artistic work. Senior students in other disciplines with appropriate background may request approval to take this course. Prerequisite: FPA 366. Visual art major students transferring into third year may request approval to take FPA 211 concurrently. Corequisite: FPA 361.

**FPA 368-3 Methods and Concepts: Spatial Presentation**
A studio course introducing spatial presentation practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. Prerequisite: FPA 161 or 170. Students can receive credit for only one of FPA 163, 268 or 368. A course materials fee is required.

**FPA 369-3 Methods and Concepts: Selected Topics**
A studio course presenting topics in art-making practices as they relate to practical, conceptual, aesthetic and historical issues in contemporary art. This course may be taken more than once for credit under different topics. Approval is required, and status as an approved major or extended minor in visual art. A course materials fee is required.

**FPA 370-3 Production Ensemble III**
Provides students with training and an historical and contemporary context for their related practicum roles as production heads and stage management and design personnel. Issues will be drawn from the School’s current production season and from national and international forums in related fields. Prerequisite: FPA 271 or prior approval. Students who received credit for FPA 372 prior to 2005 may not take FPA 370 for further credit.

**FPA 371-3 Production Ensemble IV**
Provides students with training and an historical and contemporary context for their related practicum roles as production heads and stage management and design personnel. Issues will be drawn from the School’s current production season and from national and international forums in related fields. Prerequisite: FPA 270 and 271 or prior approval. Students who received credit for FPA 373 (Technical Production II) prior to 2005 may not take FPA 371 for further credit.

**FPA 372-3 Production Practicum III**
Provides students with the opportunity to learn and practise the technical and management skills and to take on the roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Required of all upper division production and design majors and extended minors working in production and design. Students can expect to devote approximately 150 hours to their FPA 372 production practicum assignments. Prerequisite: FPA 272 and 273, and prior approval.

**FPA 373-3 Production Practicum IV**
Provides students with the opportunity to learn and practise the technical and management skills and to take on the roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Required of all upper division production and design majors and extended minors working in production and design. Students can expect to devote approximately 150 hours to their FPA 373 production practicum assignments. Prerequisite: FPA 272 and 273, or FPA 272(with STT title) and FPA 273, and prior approval.

**FPA 374-3 Stage Lighting**
Explores contemporary stage lighting for theatre, dance and opera. Participants will review the principles of theatrical lighting instruments and control systems and will experiment with the components of lighting design in a variety of studio projects. This course will require a practicum in an actual production setting: e.g. FPA 270 or FPA 271 or prior approval. Students with credit for FPA 373 prior to 2005 may not take FPA 374 for further credit. Laboratory fee required.

**FPA 375-3 Stage Design**
Explores the numerous complex processes and practices necessary to create three dimensional designs for stage and performance. Students will engage in a series of creative projects, research, analysis and presentations to enable them to develop and realize their design solutions. Prerequisite: FPA 270 or FPA 271 or prior approval. Students with credit for FPA 370 prior to 2005 may not take FPA 375 for further credit. Laboratory fee required.

**FPA 389-3 Selected Topics in the Fine and Performing Arts II**
A specific topic in fine and performing arts which is not otherwise covered in depth in regular courses and which is not appropriately placed within a single arts discipline. The work will be practical, theoretical, or a combination of the two, depending on the particular topic in a given semester. Prerequisite: will vary with the topic. May be of particular interest to students in other departments.

**FPA 390-3 Video Production II**
This course is intended for students interested in video as a means of artistic expression. Students will be encouraged to challenge accepted notions of the video medium. Participants will realize possibilities of multi channel presentations. The course comprises a series of technical workshops, screenings and group seminars whose purpose is to develop an awareness of the creative and conceptual possibilities of the medium of video production. Students will initiate and complete a short video project based on an idea of their own choosing. Projects which involve school-wide interdisciplinary collaborations will be encouraged. Prerequisite: prior approval through written proposal for a ten minute video project or installation; an interview; plus FPA 290 or equivalent video experience. A laboratory fee is required. Students should be advised that video production may require personal funding beyond the lab fee.

**FPA 393-2 Techniques of Video**
This is an intermediate course that teaches the fundamentals of digital video production and post-production. Students will be introduced to DV camera technology and non-linear editing, and will have an opportunity to become familiar with and explore the potential of digital video technology. This course is intended for third year film students preparing for their fourth year productions. Prerequisite: FPA 290 or equivalent and prior approval. Laboratory fee required.

**FPA 400-3 Directed Studies (Studio)**
An opportunity for advanced students to carry out an independent project which is planned and completed in close consultation with the supervisory instructor. Before registration, the student must submit a written proposal outlining the project in detail to the chosen supervisor for approval. Directed Studies courses may not be used as a substitute for existing courses. Prerequisite: 60 credit hours plus a minimum standing of completion of second year in any of the programs offered in the School for the Contemporary Arts and prior approval.

**FPA 401-3 Directed Studies (Theory/History)**
This course is intended to provide opportunity for advanced students to carry out an independent project which is planned and completed in close consultation with the supervisory instructor. Before registration, the student must submit a written proposal outlining the project in detail to the chosen supervisor for approval. Directed Studies courses may not be used as a substitute for existing courses. Prerequisite: 80 credit hours plus a minimum standing of completion of second year in any of the programs offered in the School for the Contemporary Arts and prior approval.

**FPA 402-4 Directed Studies (Studio)**
Provides an opportunity for advanced students to carry out an independent project which is planned and completed in close consultation with the supervisory instructor. Before registration, the student must submit a written proposal outlining the project in detail to the chosen supervisor for approval. Directed Studies courses may not be used as a substitute for existing courses. Prerequisite: 80 credit hours plus a minimum standing of completion of second year in any of the programs offered in the School for the Contemporary Arts and prior approval.

**FPA 403-4 Directed Studies (Theory/History)**
This course is intended to provide opportunity for advanced students to carry out an independent project which is planned and completed in close consultation with the supervisory instructor. Before registration, the student must submit a written proposal outlining the project in detail to the chosen supervisor for approval. Directed Studies courses may not be used as a substitute for existing courses. Prerequisite: 80 credit hours plus a minimum standing of completion of second year in any of the programs offered in the School for the Contemporary Arts and prior approval.

**FPA 404-5 Directed Studies (Studio)**
Provides an opportunity for advanced students to carry out an independent project which is planned and completed in close consultation with the supervisory instructor. Before registration, the student must submit a written proposal outlining the project in detail to the chosen supervisor for approval. Directed Studies courses may not be used as a substitute for existing courses. Prerequisite: 80 credit hours plus a minimum standing of completion of second year in any of the programs offered in the School for the Contemporary Arts and prior approval.

**FPA 411-3 Interdisciplinary Studies in the Contemporary Arts**
An interdisciplinary investigation of key issues in the contemporary arts. Prerequisite: At least 55 credit hours, which must include FPA 210 and one of FPA 310 or 311.

**FPA 412-4 Advanced Seminar in Art and Culture Studies**
Provides an in-depth investigation of a selected theoretical, historical or thematic topic in art and culture studies. This course requires independent research leading to a substantial paper, as well as directed reading preparation for seminars. Topics will vary from semester to semester. The course may be repeated when different topics are offered. Prerequisite: eight upper division credit hours including one of FPA 311 or 313. May be of particular interest to students in other departments.
COURSES

FPA 414-3 Advanced Topic in the History of Art and Culture
An in-depth investigation of a selected topic in the history of art and culture. Prerequisite: will vary according to the topic.

FPA 423-3 Practicum in Art and Culture
Investigates specific practices in art and culture, and combines work on a project with theoretical and historical research. The course will focus on the history, theory, and practices of, for example, curating, writing, and making contemporary visual artworks. Prerequisite: will vary according to the topic.

FPA 424-3 Contemporary Dance VII
The third of four upper division courses which build upon the movement vocabulary of contemporary dance. Prerequisite: FPA 321.

FPA 421-4 Contemporary Dance VIII
Continues and expands the work undertaken in FPA 420. Prerequisite: FPA 420.

FPA 425-4 Intensive Studies in Performance
Advanced performance studies in intensive specialized workshops and/or participation in choreographic projects culminating in public performance. Course content may include interdisciplinary collaborations and a variety of performance styles and techniques. Prerequisite: FPA 326 or 327 with prior approval by application. Students must be concurrently enrolled in a dance technique course at the appropriate level.

FPA 426-3 Dance/Movement Analysis
An introduction into the theory and practice of movement analysis based on recognized theories of analysis. Experiential work may be included in the course and a dance or similar movement background is necessary. Prerequisite: FPA 124 or 151 or prior approval.

FPA 427-3 Ballet III
An extension of classical ballet technique on an upper intermediate level. Understanding of basic principles is assumed and attention will be focused on combinations of movement, musicality and performance. Prerequisite: FPA 325, or prior approval.

FPA 428-3 Ballet IV
An advanced course. Students must have a thorough background in the vocabulary and techniques of classical ballet. Attention will be given to movement sequences from the ballet repertoire. Prerequisite: FPA 427, or prior approval.

FPA 430-5 Filmmaking IV
The first half of a two-semester project in advanced film and/or video production. Students are expected to participate in the realization of one or more projects during the two semesters. Students seeking entry into this course are required to present a completed script (for a drama) or detailed proposal (for a documentary or experimental film) prior to registration. The exact nature of each student's participation will be determined in consultation with the instructor. Prerequisite: FPA 231 and 10 credit hours in film and/or video studies plus prior approval. This course is open only to approved film majors. Students should be advised that film production will probably incur significant financial costs in addition to required lab fees.

FPA 432-5 Filmmaking V
This course is intended for completion of film and video projects begun in FPA 430. Particular emphasis will be given to advanced film craft in the post-production phase. The exact nature of each student's participation will be determined in consultation with the instructor. Prerequisite: FPA 430. A laboratory fee is required. Students should be advised that film production will probably incur significant costs in addition to lab fees.

FPA 436-3 Advanced Seminar in Film and Video Studies
This course features intensive study and analysis of selected topics in film theory, history, criticism and aesthetics. Each course will focus on the work of specific directors or periods; theories of narrativity; ideological analysis; particular aspects of national cinemas, etc. taught. Prerequisite: FPA 335 or permission of instructor.

FPA 443-3 Gamelan III
Continuation of FPA 434 with emphasis on the technique of the elaborating instruments of the gamelan ensemble. Prerequisite: FPA 343.

FPA 445-3 Music Composition V
This course is a continuation of FPA 346. Prerequisite: FPA 345.

FPA 446-5 Senior Project in Music Composition
Students will undertake a large-scale project in music composition as the culmination of their undergraduate composition studies. Prerequisite: FPA 445.

FPA 447-3 Computer Music Composition
The theory and practice of digital techniques and computer systems as applied to sound synthesis and music composition. The course will consider the major types of hardware and software systems developed for music from 1955 to the present, and will discuss such issues as machine programmability, user interaction, acoustic models for sound synthesis, and compositional algorithms. Students will have the opportunity for practical compositional work. Prerequisite: FPA 347. Recommended: CMPT 001 or 110. Quantitative.

FPA 450-3 Advanced Studio Skills
Primarily a course in public performance, with the option of focussing on one or advanced studio skills. The objective is to integrate and implement the techniques acquired in the earlier studios. Prerequisite: prior approval or audition.

FPA 453-3 Theory and Practice of Directing
Primarily a course in the fundamentals of directing leading to public performance of student directed projects. The course allows the option of public performance with a professional director. The focus is to integrate and implement the techniques acquired in the earlier studios. Prerequisite: FPA 150, 151, and prior approval.

FPA 457-3 Context of Theatre III
An analytical approach to a selected body of dramatic work. Course content includes an intensive consideration of practical dramatic techniques such as story structure and dramaturgy. Prerequisite: 45 credit hours and prior approval.

FPA 460-3 Studio in Visual Art V
This course permits students to work in an open studio situation. Students propose an independent program of work in the media of their choice at the beginning of the semester and develop it in critical dialogue with the instructor(s). Prerequisite: FPA 361, 367 and status as an approved major in visual art. A course materials fee is required.

FPA 461-5 Studio in Visual Art VI
Permits students completing the visual art major to work in an open and critical studio situation. Students continue to develop a body of work begun in FPA 460 for their graduation exhibition at the end of the semester. Preparation and installation of the exhibition is part of the course requirement. Prerequisite: FPA 460 and status as an approved major in visual art. A course materials fee is required.

FPA 470-3 Production Ensemble V
Provides senior students with training and an historical and contemporary context for their related practicum roles as production heads and stage management and design personnel. Issues will be drawn from the School's current production season and from national and international forums in related fields. Prerequisite: FPA 370 or 371 and prior approval.

FPA 471-3 Production Ensemble VI
Provides senior students with training and an historical and contemporary context for their related practicum roles as production heads and stage management and design personnel. Issues will be drawn from the School's current production season and from national and international forums in related fields. Prerequisite: FPA 370 or 371 and prior approval.

FPA 472-3 Production Practicum V
Provides students with the opportunity to learn and practise the technical and management skills and to take on the roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Required of all upper division production and design majors and extended minors working in production and design. Students can expect to devote approximately 150 hours to their FPA 472 production practicum assignments. Prerequisite: FPA 372 or 373 and prior approval.

FPA 473-6 Production Practicum VI
Provides students with the opportunity to learn and practise the technical and management skills and to take on senior roles and responsibilities associated with creating a performing arts production. Individual assignments will vary according to the needs of the production season. Students can expect to devote approximately 250 hours to their FPA 473 production practicum assignments. Prerequisite: One of FPA 372, FPA 372 (with STT title), FPA 373, FPA 472, FPA 472 (with STT title) and prior approval.

FPA 489-5 Interdisciplinary Project in FPA
This course permits students to explore the relationships among the arts by undertaking creative projects involving more than one art form. Students will work under the close supervision of one or more faculty and will be required to discuss their work on a regular basis with others involved in the course. Prerequisite: will vary according to the topic.

FPA 811-5 Interdisciplinary Graduate Seminar I
Critical study of contemporary issues in the fine and performing arts, with emphasis on concerns common to diverse artistic disciplines and the interaction between art and society.

FPA 812-5 Interdisciplinary Graduate Seminar II
Continuation of FPA 811. Prerequisite: FPA 811.

FPA 813-5 Interdisciplinary Graduate Studio
A selected topics studio course with an emphasis on interdisciplinary artistic projects. Prerequisite: FPA 811 or 812.

FPA 877-5 Selected Topics in Fine and Performing Arts
Study of particular artistic techniques or issues. The topic varies from semester to semester.

FPA 883-5 Studio in Fine and Performing Arts I
Intensive studio work, concentrated in a particular art discipline, but with opportunity to involve interdisciplinary materials and techniques.

FPA 885-5 Studio in Fine and Performing Arts II
Continuation of FPA 883. Prerequisite: FPA 883.

FPA 887-5 Selected Topics in Fine and Performing Arts
Study of particular artistic techniques or issues. The topic varies from semester to semester.
treatment ideology and techniques. Comparison of conservative and radical criminal policy. The controversy about the possibility of a value-free social science and about the political commitment of the social sciences. Prerequisite: CRIM 101.

CRIM 310-3 Sexual Offenders and Criminal Justice: Advanced Topics Provides an overview of current theoretical, clinical, and legal issues related to sexual offenders and sexual victimization. For each of these issues consideration will be given to different approaches and perspectives, and debates characterizing them. The topics to be covered include: explanatory models of sexual offending; developmental risk factors of sexual offending; typologies of sexual offenders; criminal careers of sexual offenders; phallocentric assessment; actuarial and clinical risk assessment; treatment programs and their effectiveness, and criminal justice system initiatives. Prerequisite: CRIM 101 and 103. Students who have taken CRIM 417 in Spring or Summer 2005 may not take this course for further credit.

CRIM 317-3 Prostitution in Canada Examines the history of prostitution; research on sex sellers, sex buyers, and managers; theories of prostitution; models of prostitution law; the history of prostitution law and its enforcement; the findings and recommendations of various Committees, Commissions and Task Forces examining prostitution in Canada. Prerequisite: CRIM 101. Students who have taken CRIM 417 (Crime of the Vortex) prior to Summer 2005 may not take this course for further credit.

CRIM 320-3 Quantitative Research Methods in Criminology A detailed examination of the quantitative research methods and techniques most frequently used in criminological research. Advantages and shortcomings of each method and the appropriateness of each technique for criminological research. Prerequisite: CRIM 101; one of CRIM 120 or 220. CRIM 320 may be taken concurrently with CRIM 321. Quantitative.

CRIM 321-3 Qualitative Research Methods in Criminology A detailed examination and application of qualitative research methods and techniques most frequently used in criminological research. Advantages and disadvantages of each method and the appropriateness of each technique for criminological research. Prerequisite: CRIM 101; one of CRIM 120 or 220. CRIM 320 may be taken concurrently with CRIM 320.

CRIM 330-3 Criminal Procedure and Evidence Critical analysis of the criminal procedure, evidence, including jurisdiction, police powers of search and seizure, the right to counsel and pre-trial and trial procedures. A brief overview of the system of rules and standards by means of which the admissibility of evidence is determined. Close examination of the Charter of Rights and Freedoms and its impact on criminal procedure and evidence. Prerequisite: CRIM 101 and 230.

CRIM 333-3 Law and the State Provides an in-depth consideration of feminist perspectives on the relationship of women to the state and the law. The nature of the contribution of criminal and family law to the reproduction of gender relations will be analyzed. The implications of legal intervention and non-intervention in family relations, sex-specific and sex-related legislation will be examined. Theoretical concepts and issues such as patriarchal ideologies, legal theory and feminist theory. Prerequisite: CRIM 101; 135. Recommended: CRIM 213.

CRIM 334-3 Law and Human Reproduction Overview of theoretical perspectives and available research on debates linked with human reproduction. Consideration of the effects of legislation, social policy and social change on contraception, birth, abortion, adoption, eugenics policies, new reproductive technologies, sexualities, and other topics. Historical and contemporary examples will be used. Feminist perspectives will be featured along with other approaches to human reproduction. Recommended: CRIM 334 and may not take both courses for credit.

CRIM 335-3 Human Rights and Civil Liberties A study of the relationship between the government and the individual. Focus on the Canadian Charter of Rights and Freedoms and its interpretation by the judiciary. Examination of the issues of equality before the law, freedom of speech, freedom of religion and freedom of expression. A study of human rights at the international, federal and provincial levels. Prerequisite: CRIM 330.

CRIM 336-3 Corporate Crime and Corporate Regulation An examination and analysis of the nature, scope and impact of corporate crime, the principal organizational, social, political and economic factors involved in the definition and commission of such crimes, and the ways in which governments and organizations respond to the problem. Particular types of corporate crime will be used as vehicles for exploring the legal and administrative framework that defines and regulates corporate wrongdoing. Prerequisite: CRIM 101; 135. Recommended: CNS 280 or ECON 101.

CRIM 338-3 Philosophy of Law An examination and analysis of the nature, scope and impact of corporate crime, the principal organizational, social, political and economic factors involved in the definition and commission of such crimes, and the ways in which governments and organizations respond to the problem. Particular types of corporate crime will be used as vehicles for exploring the legal and administrative framework that defines and regulates corporate wrongdoing. Prerequisite: CRIM 101; 135.

CRIM 345-3 Theoretical Perspectives on Punishment Examines theories of punishment in Western societies, with a particular emphasis on the revisionist analysis which explains punishment techniques in terms of social-structural relationships rather than the rhetoric of reformers. The course also examines competing explanations of the demise of corporal punishment and the ascendance of incarceration at the end of the eighteenth and beginning of the nineteenth century, the advent of various kinds of ‘community corrections’ through the twentieth century, and changes in punishment and social control with the advent of ‘risk society.’ Prerequisite: CRIM 101.


CRIM 352-3 Environmental Criminology: Theory and Practice Explores the history of the field of environmental criminology and critically examines the theoretical approaches within the field. Special emphasis is placed upon the relationship between crime, fear and the environment, the criminality of place and the decision processes involved in criminal events. Prerequisite: CRIM 101.

CRIM 355-3 The Forensic Sciences Examines the use and interpretation of physical forensic evidence in court. It will critically examine and evaluate the major forensic sciences used in criminal investigations today, as well as look at the crime scene. Subjects examined will include forensic pathology, odontology, biology, DNA evidence, firearms evidence, toxicology chemistry and questioned documents. Techniques will be illustrated with case studies. Breadth-Social Sciences.

CRIM 361-3 Practicum III Third semester of work experience in the Criminology Co-operative Education Program. Credits from this course do not count towards the credit requirements for an SFU degree. Prerequisite: successful completion of CRIM 261 and 60 credit hours with a minimum CGPA of 2.75.

CRIM 369-4 Professional Ethics and Interpersonal Skills in Criminal Justice Immediate ethical issues confronting the professional in the criminal justice system are examined. Such concerns include privileged communications and confidentiality in fields and research situations; the conflict between the professional’s duty to protect society and harm to the client; ethics of decision-making; research ethics; situation ethics; professional ethical codes and legal constraints on professional conduct. Different modes of personal interaction in selected parts of the criminal justice system are examined and taught. Mixed problems of skill and ethics are explored in controlled laboratory settings. Prerequisite: CRIM 101; reserved for criminology majors and honors. This course is a prerequisite for CRIM 462. Completion of this course does not guarantee admission to field practice.

CRIM 370-3 Directed Readings Independent readings in a selected field of study, under the direction of a single faculty member. Papers will be required. Prerequisite: CRIM 320 and 330, and written application to the school no later than the last day of classes of the preceding semester. CRIM 370 and 470 may not be taken concurrently.

CRIM 384-3 Crime and Literature Questions of crime and criminal justice in novels and other forms of fiction are explored. Includes a critical discussion of specific works, a general analysis of the impact of social settings and outcomes, the psychology and sociology of criminal characters and their victims, and whether justice was achieved or denied in the course of the plot. Writing intensive. Prerequisite: students who have taken CRIM 416 or 417 or 418 as Crime and Literature may not take this course for further credit. This course is identical to ENGL 384 and students may not take both courses for credit.

CRIM 402-3 Biological Explanations of Crime Examines possible biological factors that could result in a predisposition towards criminal behavior. These include not only the genetic factors that affect behavior and therefore could potentially predispose towards crime, but also biochemical, neurological, nutritive and accidental effects such as head injuries. This course will use both crime evidence both for and against any possible biological predispositions for criminogenic behaviors, together with the interaction with the environment. In particular, moral and ethical issues will be considered and debated. Prerequisite: CRIM 101. Students with credit for CRIM 416 in the summer 2000 or 2001 semester may not take CRIM 402 for further credit.

CRIM 410-3 Decision-making in Criminal Justice Examination of the factors which influence decision making in the criminal justice system. The exercise of discretion by criminal justice personnel; the role of organizational policies and priorities in decision making; the involvement of victims and the public. Consideration of decision making at specific stages of the criminal justice process. Prerequisite: CRIM 101.

CRIM 411-3 Crime and Victimization of the Elderly The elderly in conflict with the law: analysis of specific behavioral changes associated with old age likely to bring the elderly person into conflict with the law. Analysis of certain types of offences sometimes committed by the elderly. Treatment and prevention strategies. The elderly as victims: proneness and vulnerability to victimization, patterns of victimization, individual and environmental correlates of victimization, consequences of victimization, fear of victimization. Treatment and preventive strategies. Prerequisite: one of CRIM 100, 101 or 102.

CRIM 412-3 Crime, the Media and the Public Focus is upon the relationship among the content of media, especially books, films and TV. There will be an examination of the nature of political efforts by members of the public to alter the determined relationship between law enforcement and legislative measures. Prerequisite: CRIM 101.

CRIM 413-3 Terrorism Considers the nature, extent, and basis of terrorism as an official crime throughout the world and its impact upon criminal justice systems. Theoretical explanations in a comparative perspective will be employed to examine the impact of terrorism on various countries and the response of governments to it. Prerequisite: CRIM 101.

CRIM 416-3 Current Issues in Criminology and Criminal Justice A critical analysis of certain ‘hot’ issues in criminology and criminal justice. The topics covered change from semester to semester. Prerequisite: CRIM 101. A student may not take for credit toward the degree more than three special topics courses (i.e. CRIM 416, 417 418).

CRIM 417-3 Current Issues in Criminology and Criminal Justice A critical analysis of certain ‘hot’ issues in criminology and criminal justice. The topics covered change from semester to semester. Prerequisite: CRIM 101. A student may not take for credit toward the degree more than three special topics courses (i.e. CRIM 416, 417 418).

CRIM 418-3 Current Issues in Criminology and Criminal Justice A critical analysis of certain ‘hot’ issues in criminology and criminal justice. The topics covered change from semester to semester. Prerequisite: CRIM 101. A student may not take for credit toward the degree more than three special topics courses (i.e. CRIM 416, 417 418).

CRIM 419-3 Indigenous Peoples, Crime, and Criminal Justice An in-depth examination of indigenous peoples and the criminal justice system. Historical and contemporary consideration of indigenous-white contact. Indigenous conflict with the law and involvement in the criminal justice system. Crime and the delivery of criminal justice services in the Canadian north, including the role of the RCMP and the activities of the circuit criminal court. Examination of federal and provincial policies designed to reduce over-representation of indigenous peoples in the criminal justice system. The creation of indigenous-controlled programs and criminal justice structures to reduce indigenous conflict with the law. Comparative study of other jurisdictions including Greenland, the United States and Australia. Prerequisite: CRIM 101.

CRIM 420-3 Advanced Topics in Criminological Research An extension of CRIM 220 and 320, this course will examine one or more of the following: evaluative research in the criminal justice context; techniques and efficacy of predicting delinquency and recidivism; survey research; archival, historical or legal methods; field research, etc. Prerequisite: CRIM 101; 320 and 321.

CRIM 431-3 Comparative Criminal Justice Systems Critical examination of the theory and method of comparative criminal justice. Review of common law systems, civil law systems, and socialist law systems. Specific consideration of the development, structure and operation of the criminal justice systems in selected countries, which may include England, France, the Netherlands, Germany, the People's Republic of China, the Soviet Union, the People's Republic of Japan, the People's Republic of Korea, and the People's Republic of Vietnam. The course also examines the impact of historical, social, political, religious and cultural factors on the criminal justice system. Consideration of the structure and operation of various components of the criminal justice process in selected countries, including the police, criminal courts, and corrections. Prerequisite: CRIM 101.

CRIM 432-3 Gender in the Courts and the Legal Profession The gendered nature of law will be addressed through an examination of its underlying factual assumptions, and the use of social science research as evidence in equality litigation. The use of the charter, human rights legislation, and other legal means to achieve gender equality through the legal system in the areas of work, employment and pay equity, and compensatory schemes for personal injuries will also be examined. This course will also examine women's struggles to gain admittance to the legal profession, and the barriers which may still prevent them from.
participating equally in the profession today. Prerequisite: CRIM 330.

CRIM 435-3 Adult Guardianship Law
A comprehensive exploration of the law affecting adult guardianship, substitute decision-making, and adult protection in Canada, including a detailed examination of the legal, ethical and philosophical underpinnings of the relevant legislation in British Columbia. Topics include assessing mental incapability, powers of attorney, living wills and health care directives, end of life decision-making, the law affecting consent to health care, and court-ordered guardianship for adults. Prerequisite: CRIM 101. Recommended: one of CRIM 330 or 335. This course is identical to GERO 435 and students cannot take both courses for credit. Students with credit for CRIM 418 when offered as Adult Guardianship Law, and GERO 410 when offered as Adult Guardianship Law, may not take CRIM 435 or GERO 435 for further credit.

CRIM 436-3 Corporate Crime and Corporate Regulation: Advanced Topics
A detailed examination and analysis of particular types of corporate wrongdoing and the nature and impact of the relevant legal and administrative framework. The topics will be selected by the particular instructor and will, therefore, vary according to the instructor's interests as well as topicality. The areas of corporate crime which are chosen may include one or more of the following: 'economic crimes' such as violations of statutes which regulate competition, protect intellectual property, and safeguard stock market investors; crimes against the environment such as air and water pollution; and, crimes against consumers including the marketing of hazardous products, contaminated food, or dangerous drugs and devices. Prerequisite: CRIM 101. Recommended: CRIM 336.

CRIM 437-3 Crime and Misconduct in the Professions
Examines the use of self regulation by professional organizations (e.g. law societies, colleges of physicians and surgeons, stock exchanges) and the increasing demand by other occupational groups and social and economic entities to be governed by these internal controls in addition to, or in lieu of, the criminal and other state law. It will specifically examine how self regulation law is used in the context of self-regulation and how professionals can bypass the criminal law through self-regulating organizations. The professions will be examined in the context of administrative, civil and criminal law. Implications for self regulation in other areas and the future of self-regulation will also be considered. Prerequisite: CRIM 330.

CRIM 440-3 Correctional Administration and Planning
Theory and practice of organization and administration of correctional agencies. Particular attention is given to the political/bureaucratic interface in correctional administration, management styles, labour relations, management support systems and program planning. Identification and assessment of corrections management objectives. The relationship between corrections administration and other areas of the criminal justice system. Prerequisite: CRIM 101; 131 and 241. Recommended: POL 251

CRIM 442-3 Restorative Justice Practice: Advanced Topics
An in-depth examination of the various community-based and institutional practices in promoting restorative processes, based on an examination and comparison of the values, philosophical and theoretical underpinnings and outcomes of selected western and non-western models. Practices examined will include a range of restorative justice initiatives, including victim-offender mediation, family-group conferencing, multi-party mediation, and various circle remedies. This examination will include the application of restorative justice in the community, in schools and at all levels of the legal process (pre-arrest to post-incarceration and reintegration). Recommended: CRIM 315 and 343.

CRIM 450-5 Techniques of Crime Prevention II

CRIM 451-3 Advanced Techniques in Forensic Science
Looks at the advanced and sometimes more controversial areas of forensic science used in the criminal justice system today. Most areas are those outside the crime lab and require extensive in-depth training in a very focused field. Seminars may cover areas such as the use of polygraph, blood spatter pattern analysis, entomology, pathology, odontology, anthropology, genodice investigation, facial alignment, crime scene analysis on land, underwater and mass hiocide scenarios. Prerequisite: CRIM 101. Students with credit for CRIM 420 in 01-3, 02-3, 03-3, 04-3 or 07-3 may not take CRIM 451 for further credit. Recommended: CRIM 355.

CRIM 455-3 Advanced Issues in Policing
Covers the major issues surrounding policing in the 21st century. The topics to be examined will include the challenges confronting police services in a global community; policing and training of police officers; the planning and delivery of police services; models of deployment; policing the multi-cultural society; use of force by police officers; the effectiveness of police interventions; the use of technology in police work; and community policing. Prerequisite: CRIM 101, 131 and 251.

CRIM 461-3 Practicum IV
Fourth semester of work experience in the Criminology Co-operative Education Program. Credits from this student practicum towards the credits required for a SFU degree. Prerequisite: Successful completion of CRIM 361 and 75 credit hours with a minimum CGPA of 2.75.

CRIM 462-15 Field Practice
Supervised three month field practicum in selected criminal justice agencies. Students are required to complete a series of reports addressing theoretical and practical issues relating to their placement as well as to attend regular feedback seminar discussions with faculty supervisors and other field practicum students. Prerequisite: prior approval of the school and a minimum CGPA of 2.5 is required. Applicants must be formal criminology majors or honors students, and must be registered in or have completed CRIM 320, 321 and 369. In extraordinary circumstances, students may be accepted with CRIM 320 or CRIM 321, with the approval of the field practice coordinator. A minimum grade of B+ in CRIM 369 is required. Only under exceptional circumstances, to a limit of three credit hours, and with the formal written approval of the director of the undergraduate program, will registration for course work in addition to CRIM 462 be permitted.

CRIM 470-5 Directed Studies
Independent research in a selected criminological area, under the direction and supervision of at least one faculty member. A research report is required. Prerequisite: CRIM 200, 311 and 330. Written application to the school no later than the last day of classes of the preceding semester. Reserved for criminology honors and majors. Recommended: CRIM 370.

CRIM 490-5 Honors Thesis I
An in-depth investigation of a selected topic in criminology, including a comprehensive review of the literature as well as initial and partial completion of the thesis research. Open only to students who have been admitted to the criminology honors program.

CRIM 491-5 Current Theory and Research in Criminology: Advanced Topics
A detailed and comprehensive examination of the dominant theoretical research programs currently found in criminology. The subject matter of the seminars may change from year to year according to topicality and may include the following: biological theory and research; social psychological research programs (e.g., social learning theory); environmental criminology; left realism; feminism; post structuralism and post modernism. Students are also required to attend a weekly pro-seminar. Prerequisite: normally only to students who have been admitted to the criminology honors program. Other students may be admitted under exceptional circumstances with the written permission of the director of undergraduate programs.

CRIM 499-12 Honors Thesis II
An honors thesis is a research report written under the supervision of a faculty member, a copy of which is to be permanently lodged in the School of Criminology. Students are required to attend a weekly seminar at which various issues associated with the linking of theory and method are examined and where students can both discuss their progress and share their research experiences. On completion, the thesis is to be orally defended in a school seminar. Open only to students who have been admitted to the criminology honors program. Students are not permitted to take other courses while enrolled in this course. Prerequisite: a minimum grade of B in CRIM 490 and 491 is required.

CRIM 800-3 Theories of Crime
A comprehensive overview of theories and the development of theoretical knowledge in criminology. This seminar will familiarize students with competing levels of understanding vis-à-vis crime and deviance phenomena. The course will emphasize the integration of historical and modern theories, theory construction and testing, and the impact of factors such as ideology, politics and social structure on the emergence of criminological thought.

CRIM 801-3 Theories of Crime II
Intensive exposure to the major streams of criminological theory. Topics for in-depth analysis will be selected according to the availability and interest of specific course instructors. Emphasis will be placed on the relationship between ideas and social forces, as well as the interplay of theory and practice.

CRIM 810-3 The Phenomena of Crime I
Designed for the beginning graduate student, this course covers a wide variety of topics all of which deal with what we know about the phenomena of crime historically, temporally and geographically. This course will look at the patterns of crime and victimization, and will explore crime patterns at local, provincial, national and international levels. Known characteristics of specific forms of crime will be studied.

CRIM 811-3 The Phenomena of Crime II
Topics for in-depth analysis will be selected according to the availability and interest of specific course instructors and selected from but not limited to one or more of the following topics: historical criminality; the ecology of crime; environmental criminology; the
media and crime; fear of crime; victimization; organized crime; or corporate crime.

CRIM 820-3 Criminal Justice Policy Analysis
An introduction to policy development and policy analysis in the field of criminal justice, including a general review of the function of bureaucratic agencies in the United States and the particular role of government ministries providing criminal justice services. Major topic areas include: organization theory; policy planning theory; decision theory; inter-governmental analysis as it applies to the administration of justice; and comparative analyses of criminal justice policies especially related to international or trans-national crime.

CRIM 821-3 Criminal Justice Analysis: A Systems Approach
The course will emphasize the systems approach in criminal justice problem analysis, policy development and planning. Program evaluation techniques will be applied to the major types of planning and program initiatives taken within or across criminal justice systems. Topics for in-depth analysis will be selected according to the availability and interest of specific course instructors and may be selected from any area of criminal justice practice including: law enforcement; the judiciary; court administration; corrections; or legal services.

CRIM 830-3 Law and Social Control I
An examination of the social utility of legal intervention in the instance of criminal law; the relationship between law and social control; and the process of law making and the social efficacy of specific criminal sanctions.

CRIM 831-3 Law and Social Control II
Topics for in-depth analysis will be selected according to the availability and interest of specific course instructors and selected from but not limited to one or more of the following themes: theoretical perspectives on punishment and social control; theoretical perspectives on policing; law and mental health; law and the environment; and law and gender.

CRIM 840-3 Proseminar
Examination of current theory and research by faculty in the School of Criminology.

CRIM 860-3 Research Methods I
The course will cover basic research design for criminal justice problems and basic techniques for the conduct of research in criminology and socio-legal study. The research methods covered will comprise both quantitative and qualitative techniques. The course is intended to establish fundamental research skills to be applied in faculty directed research methods seminars, in other core area courses, and in the preparation of theses and dissertations.

CRIM 861-3 Research Methods II
This course covers both parametric and non-parametric statistical techniques with an emphasis on parametric analysis. Basic descriptive and inferential statistics will be covered, including univariate measures, analyses of cross classified data, correlation, t-tests, analysis of variance, regression, and related measures. Also discussed are the experimental and statistical research strategies which produce those data. The approach will be conceptual and will emphasize the strengths, weaknesses, selection and application of various statistical, experimental and quasi-experimental techniques.

CRIM 862-3 Research Methods III
This course will address a range of research techniques generally subsumed under the rubric of 'qualitative' research including field research, interview techniques, historical and legal research, and documentary analysis. Emphasis will be on the logic underlying such inquiry, the advantages and limitations associated with different sources of information and procedures, and the processes by which analytical rigor is achieved.

CRIM 863-3 Research Methods IV
Advanced topics, issues and techniques in criminological and socio-legal research. The subject matter of this course will vary according to instructor interests and student interest. Specific areas of concentration may include the following: advanced multivariate statistical techniques, documentary and historical methods, evaluative and predictive research, participant observation/ethnography, systems analysis, and computer simulation modeling. Prerequisite: CRIM 860, 861, 862, or by permission of the instructor.

CRIM 869-3 Professionalism and Criminal Justice
This course is designed for students entering a field practicum placement via CRIM 880 and is a required component of the MA by coursework, Project and Practicum option. It introduces the student to the legal and ethical issues relevant to professionalism and leadership in the field of Criminology. Related professional codes of conduct will be examined. The course integrates theory and practice from a case study perspective.

CRIM 870-3 Directed Readings
Intensive readings under the supervision of a faculty member, in areas of interest related to the student's program.

CRIM 871-873-3 Selected Topics
Concentrated studies in areas of student specialization.

CRIM 880-3 Field Practicum
A semester of full time advanced and intensive practicum experience supervised by selected faculty and justice system personnel. Students will assume a large measure of responsibility and participate in a range of activities related to the placement. Prerequisite: CRIM 869.

CRIM 885-3 Master's Project
MA by coursework, project and practicum paper. Prerequisite: CRIM 869.

CRIM 889-6 MA Thesis
CRIM 889-6 PhD Thesis

Undergraduate Semester in Dialogue DIAL
DIAL 390-5 Undergraduate Semester: Dialogue
The Dialogue component of the Undergraduate Semester in Dialogue will immerse students in the art and practice of thinking and communicating. The focus will be on strategies and methods to use in understanding diverse perspectives. Students will have an opportunity to expand their verbal and written communication skills as well as explore dialogue as a developing academic field. Prerequisite: 45 credit hours. Students should apply prior to the semester in which they wish to enrol. Students can be accepted into either the Summer Institute in Dialogue (DIAL 390 and 391, 10 credit hours) or the Undergraduate Semester in Dialogue (fall or spring semester, DIAL 390, 391 and 392, 15 credit hours) but not both. Writing/Breadth-Social Sciences.

DIAL 391W-5 Undergraduate Semester: Seminar
Topics covered each semester will vary, but generally each course will examine a subject that encourages broad approaches and probes provocative issues. The course will consist of discussions led by faculty, frequent visits from relevant off-campus experts, a heavy reading load, and a number of individual and group student projects. Learning will be active rather than passive, stimulating students to research, explore and discuss rather than following a lecture format. Prerequisite: 45 credit hours. Students should apply prior to the semester in which they wish to enrol. Students can be accepted into either the Summer Institute in Dialogue (DIAL 390 and 391, 10 credit hours) or the Undergraduate Semester in Dialogue (fall or spring semester, DIAL 390, 391 and 392, 15 credit hours) but not both. Writing/Breadth-Social Sciences.

DIAL 392-5 Undergraduate Semester: Final Project
For their final project, each student will produce a manuscript suitable for submission to a major public media outlet on a topic relevant to the course focus for that semester. Prerequisite: 45 credit hours. Students should apply prior to the semester in which they wish to enrol. Students can be accepted into either the Summer Institute in Dialogue (DIAL 390 and 391, 10 credit hours) or the Undergraduate Semester in Dialogue (fall or spring semester, DIAL 390, 391 and 392, 15 credit hours) but not both. Breadth-Social Sciences.

DIAL 392W-5 Undergraduate Semester: Final Project
For their final project, each student will produce a manuscript suitable for submission to a major public media outlet on a topic relevant to the course focus for that semester. Prerequisite: 45 credit hours. Students should apply prior to the semester in which they wish to enrol. Students can be accepted into either the Summer Institute in Dialogue (DIAL 390 and 391, 10 credit hours) or the Undergraduate Semester in Dialogue (fall or spring semester, DIAL 390, 391 and 392, 15 credit hours) but not both. Writing/Breadth-Social Sciences.

DIAL 460-4 Seminar in Dialogue and Public Issues
Focuses on the practical tools and conceptual approaches used in dialogue, with comparisons of the role and impact of dialogue among community, government, corporate, union, First Nations, legal-regulatory, advocacy and organizations. Emphasis is on interaction among interest groups and stakeholders, cultures of negotiation and
decision-making, techniques of facilitation, and strategies for effective outcomes. Prerequisite: 75 credits including either at least two of CMNS 332, 347, 425, 432, 437, 447 or DIAL 390, 391, 392.

DIAL 461-3 Field Placement in Dialogue
Students work under faculty supervision in placements where dialogue is planned or where dialogue occurs. Arrangements are the responsibility of the student, and enrolment is limited. Prerequisite: 75 credits including CMNS/DIAL 460, and permission of instructor.

Earth Sciences EASC Faculty of Science

EASC 101-3 Physical Geology
An introduction to the origin and character of minerals, rocks, earth structure, earth surface processes and plate tectonic theory. Students with credit for GEOG 112 cannot take this course for further credit. Breadth-Science.

EASC 103-3 The Rise and fall of the Dinosaurs
Class Dinosaurs and how our understanding of this extinct group continues to evolve in the light of new discoveries. Topics include the rise of the dinosaurs, criteria for the recognition of the different groups, fossil data regarding dinosaur metabolism, evidence of dinosaur behavior, possible evolutionary relationships with birds, and theories of dinosaur extinction. Students may not take EASC 103 for credit towards EASC major or minor program requirements. Breadth-Science.

EASC 103W-3 The Rise and fall of the Dinosaurs
Class Dinosaurs and how our understanding of this extinct group continues to evolve in the light of new discoveries. Topics include the rise of the dinosaurs, criteria for the recognition of the different groups, fossil data regarding dinosaur metabolism, evidence of dinosaur behavior, possible evolutionary relationships with birds, and theories of dinosaur extinction. Students may not take EASC 103 for credit towards EASC major or minor program requirements. Writing/Breadth-Science.

EASC 104-3 Geohazards - Earth in Turmoil
An introduction to the range of geological hazards that affect the Earth, the environment and humanity. Topics covered will include the hazards and risks related to volcanic eruptions, earthquakes, landslides and avalanches, Tsunamis, geomagnetic storms and other potentially cataclysmic events. The forecasting and possible mitigation of these geohazards will also be investigated. Students with credit for GEOG 312 prior to 05-3 may not take this course for additional credit.

EASC 106-3 Earth Through Time
An introduction to the changes that the Earth has experienced, from its initial formation to the present day, intended for non-majors. Topics include changes in plate tectonic style, mountain building periods, glaciations during Earth history, formation of life, the fossil record and evolution, major extinctions, and the rise of man. Students with credit in EASC 102 may not take EASC 106 for additional credit. Students may not take EASC 106 for credit towards EASC major or minor program requirements. Breadth-Science.

EASC 107-3 Economic Geological Resources
An overview of the Earth’s major economic resources of the Earth for non-Earth Science majors or minors. Background will be provided on major Earth processes which cause significant natural resources including metallic resources, hydrocarbon and other energy resources, industrial mineral and groundwater resources. Much of the focus will be on the changing nature of how resources have been found and exploited through history and how this may evolve in the near to distant future. Students may not use EASC 107 for credit towards EASC major or minor program requirements. Breadth-Science.

EASC 108-3 Exploring the Solar System
An introduction to the geology of our Solar System through a comparative survey of the planets. Emphasis will be on the geology of the Earth and how we can use this knowledge to learn more about the neighbouring planets. A wealth of accessible information now exists from which we can attempt to reconstruct the geological history of each planetary surface in our Solar System. Comparative planetology will be used to explore such topics as the structure and origin of the solar system, the origin and fate of the Earth, the importance of water in the solar system, the formation and geological history of planetary lithospheres and atmospheres.

EASC 201-3 Stratigraphy and Sedimentation
An introduction to the nature, origin and interpretation of stratified earth materials. Principles of lithostratigraphy, biostratigraphy and chronostratigraphy, sequence stratigraphy, the facies concept. Prerequisite: EASC 102 or 210.

EASC 202-3 Introduction to Mineralogy
Introduction to crystallography, crystal chemistry and chemical properties and chemical principles necessary for the study of minerals. Prerequisite: EASC 101. Corequisite: CHEM 121.

EASC 204-3 Structural Geology I
Description, classification and interpretation of earth structures: folds, faults, joints, cleavage and lineations. Elementary rock mechanics. Prerequisite: EASC 102 or 210, and PHYS 125 or 120 or 140, or (PHY 101 with a grade of B or higher).

EASC 205-3 Introduction to Petrology
Optical phenomena related to the use of the polarizing microscope in the identification of minerals in thin section. Petrogenesis and classification of igneous sedimentary and metamorphic rocks. Hand specimen and thin section identification of rocks and minerals. Prerequisite: EASC 202, CHEM 122, PHYS 121 (or PHYS 102 with a grade of B or higher), and PHYS 131 (or PHYS 103 with a grade of B or higher). PHYS 125 may be substituted for PHYS 121.

EASC 206-2 Field Geology I
Seven days of field excursions to demonstrate the geology of British Columbia. Prerequisite: EASC 101.

EASC 207-3 Introduction to Applied Geophysics
An introduction to geophysics emphasizing seismic, magnetic and gravimetric observations of the Earth. Applied geophysics. Prerequisite: MATH 152, PHYS 121, 131, all with a grade of C- or higher, or MATH 152, with a grade of C- or higher and PHYS 102, PHYS 130 both with a grade of B or higher. Quantitative.

EASC 208-3 Introduction to Geochemistry
Distribution and cycles of elements, minerals and rocks on and within Earth. Understanding and evolution of Earth systems through high and low temperature fluid-rock interaction, aqueous geochemistry, stable and radioactive isotopes. Prerequisite: EASC 202, CHEM 121, 122 and 126.

EASC 210-3 Historical Geology
The study of the evolution of the Earth, the geological time scale, fossils and evolution, stratigraphic concepts, geologic history of the Western Canadian Cordillera. Prerequisite: EASC 101 or GEOG 111. Students with credit for EASC 102 prior to 05-3 may not take this course for credit. Breadth-Science.

EASC 300-3 Selected Topics in Earth Sciences
An in-depth treatment of selected topics of earth sciences. Prerequisite: to be determined by instructor.

EASC 301-3 Igneous and Metamorphic Petrology
Mineralogy, phase relations, origin of igneous rocks; classification of igneous rocks. Mineralogy and textures of metamorphic rocks; hand sample and thin sections. Prerequisite: EASC 205 and 208.

EASC 302-3 Sedimentary Petrology
Description and classification, field and microscopic identification of sedimentary rocks; petrogenesis and provenience, reconstruction. Prerequisite: STAT 101 or STAT 201, EASC 201 and 205.

EASC 303-3 Environmental Geoscience
Environmental geology is a branch of earth science that deals with the relationship of people to their geological habitat. Topics covered will include environmental impact of mineral extraction and logging; erosion and sedimentation in rural and urban environments; and mass movements in mountainous terrain. The course includes two 1-day fieldtrips that usually occur on Saturdays. Prerequisite: 60 credits including six credit hours in Earth Sciences and GEOG 213.

EASC 303S-3 Environmental Geoscience
Environmental geology is a branch of earth science that deals with the relationship of people to their geological habitat. Topics covered will include environmental impact of mineral extraction and logging; erosion and sedimentation in rural and urban environments; and mass movements in mountainous terrain. The course includes two 1-day fieldtrips that usually occur on Saturdays. Prerequisite: 60 credit hours including six credit hours in Earth Sciences and GEOG 213. Writing.

EASC 304-3 Hydrogeology
An introduction to the basic concepts and principles governing the flow of groundwater in the subsurface environment. These are used to develop an understanding of aquifers and their physical properties, groundwater sustainability and management, and interaction of groundwater with surface water. In addition, as a foundation course in fluids in geologic media, this course has relevance to the oil and gas and mining industries, as well as to engineering applications such as dewatering. Prerequisite: One of EASC 101 or GEOG 111, and PHYS 126 or 121 (or PHYS 102 with a grade of B or higher). Quantitative.

EASC 305-3 Quantitative Methods for the Earth Sciences
Implementation of mathematical methods and numerical techniques for problem solving in the Earth Sciences. Examples and lab assignments will use Excel spreadsheets and/or Matlab computer programming/display software. Concepts covered include quantitative techniques for field data and error analysis in the geosciences, basic computer programming concepts and numerical modeling of Earth processes. Prerequisite: EASC 101, MATH 152 (grade of C or higher), PHYS 121 (grade of C or higher), STAT 101 or STAT 201 (grade C or higher), and six credit hours in any 200 division or higher EASC courses.

EASC 306-3 Field Geology II
A twelve day field camp held after final exams in the Spring semester. Students will learn how to observe, record and interpret geological features, and will carry out geological mapping and analysis. Approximately five 1-hour lectures on field methods, equipment and safety will precede the field camp. Field locations may vary from year to year (field study). Prerequisite or corequisite: EASC 201, 204, 205, 206 and GEOG 213.
Application, instrumentation and limitations of electrical, electromagnetic, ground penetrating radar and seismic methods for engineering and geoscience applications. Prerequisite: EASC 207. Quantitative.

The study of motion and deformation of the earth's crust and upper mantle at a regional and global scale. A detailed examination of plate tectonic theory; plate boundary types, mechanics of plate movements, basin formation and mountain building. Case studies of major orogenic belts of the world highlighting regional structural deformation processes in response to tectonic stresses. Students are required to attend a weekend field trip during this course. Prerequisite: EASC 201, 204, 205, 206 and 207. Students who completed EASC 407 prior to fall 1998 may not take this course for credit.

Principles of classification, morphology and development of the major groups of animals and plants in the geological record; the paleoecologic significance of fossils. Prerequisite: EASC 102 or 210. Recommended: BISC 102. Students with credit for EASC 203 may not take EASC 310 for additional credit.

Principles of classification, morphology and development of the major groups of animals and plants in the geological record; the paleoecologic significance of fossils. Prerequisite: EASC 102 or 210. Recommended: BISC 102. Students with credit for EASC 203 may not take EASC 310 for additional credit. Writing.

The principles of stratigraphy, and their integration with sedimentary facies analysis. Techniques applicable to outcrop and subsurface correlation, as well as the principal stratigraphic paradigms and their application to the rock record are discussed. Prerequisite: EASC 201 and 204. Recommended: EASC 206, 302.

An introduction to the engineering properties and behavior of soil and rock. Laboratory and field investigations of soil and rock properties. Applications in engineering design will be illustrated with case studies of slope stability, road design, foundations and underground excavations. Emphasis will be placed on the importance of soil and rock mechanics in the resources sector. Prerequisite: EASC 101, 204 or permission of instructor.

An introduction to the study of ice in the environment from a geophysical perspective, with attention to glaciers and ice sheets as (1) components of the global climate system, (2) indicators and archives of environmental conditions, (3) agents of catastrophic change, and (4) resources. Topics include the physical and chemical properties of ice, glacier and ice-sheet thermodynamics, dynamics of Greenland and Antarctica, ice cores, subglacial lakes, unstable ice flow, and resource exploitation in glacialized areas. Prerequisite: 60 credit hours, including MATH 152 (with grade C or higher), PHYS 126 or PHYS 121 (with grade of C or higher), and GEOG 213 or permission of the instructor. Quantitative.

Application of geophysical methods to the study of the Earth's evolution and its interior structure; geometrical nature of plate tectonics on a sphere; the Earth's magnetic field; its use in reconstruction of past plate motions; earthquake seismology and understanding the deep interior, gravity and lithospheric flexure, radioactive decay and an absolute geological time scale; heat loss and mantle convection; structure of oceanic lithosphere; structure of continental lithosphere; the early Earth and the tectonics of other planets. Prerequisite: EASC 207 or permission of instructor. Quantitative.

EASC 403-3 Quaternary Geology
Stratigraphy and history of the Quaternary Period with emphasis on glaciation, glacial sediments, and landforms. The course includes several field trips, including one or two weekend trips. (2-3-0) Prerequisite: EASC 201 and GEOG 313 or permission of instructor.

EASC 404-3 Structural Geology II
Application of advanced concepts in structural geology to a variety of tectonic problems; deformation mechanisms; flow concepts applied to ductile and brittle deformation; description and interpretation of microstructural fabrics; strain partitioning from grain scale to global scale. Prerequisite: EASC 204, 301 and 309.

EASC 406-3 Field Geology III
An advanced field study course that provides real-world examples of major topics in the earth sciences. The course includes both a classroom component throughout the semester and a field component of about 2-3 weeks. The field component is usually held shortly after the spring examination period (generally late April to early May). The field component is an excursion to a variety of field sites that change yearly. Prior to student registration, the faculty member, in consultation with the students, will determine the field sites and will determine the mandatory supplementary course fees for that offering. Some offerings of EASC 406 may require overseas travel and possibly a significant change in the timing and cost of the field component. Students should be aware that these costs are above the costs of food and personal items on the field course. Prerequisite: EASC 306 and a minimum of nine other credit hours in upper division earth science courses (or permission of the instructor). Recommended: EASC 309.

EASC 408-3 Regional Geology of Western Canada
The stratigraphy, structure and historical geology of western Canada. Terrane analysis. Important mineral and fossil sites will be discussed. Prerequisite: EASC 309. Students who completed EASC 305 prior to fall 1998 may not take this course for credit.

EASC 410-3 Groundwater Contamination and Transport
An introduction to contaminant hydrogeology and mass transport processes in groundwater regimes. Topics include natural groundwater quality, sources of contamination, fate and transport of mine waste, agriculture, saltwater intrusion, and industrial activities, and the processes and principles governing mass transport, including advection, dispersion and diffusion. The course also explores methodologies for site investigations as well as various remediation methods. Prerequisite: EASC 412. Quantitative.

EASC 411-3 Terrain Analysis
Application and role of Quaternary Geology in terrain mapping and terrain analysis and will emphasize the British Columbia Terrain Classification System. Applications of terrain maps, including landslide, earthquake and volcanic hazard mapping will be discussed. The lab sessions will cover morphological mapping, surficial material genesis, geomorphic processes and finally, production of a terrain and terrain stability map. The course includes three days in the field to ground truth the map. Prerequisite: EASC 206, 303. Recommended: GEOG 252, 313.

EASC 412-3 Groundwater Geochemistry
Emphasis is on the fundamentals of water-rock interactions and the chemistry of natural waters, developing an understanding of the physical and chemical principles that govern the geochemistry of water within Earth's crust. Topics will include water sample collection and analysis, chemical thermodynamics, gas-water-rock interactions and geochemical modeling of a range from weathering and recharge to acid mine drainage, diagenesis and hydrothermal ore deposit formation. Prerequisite: EASC 208. Corequisite or prerequisite: EASC 304.

EASC 413-3 Resource Geotechnics
Application of geotechnics to the resource sector with particular emphasis on forestry and minerals. Topics covered will include: Engineering geological characterization, slope failure mechanisms in soil and rock, methods of slope stability analysis, techniques of slope reinforcement and stabilization, slope monitoring, road construction and deactivation, underground excavations and petroleum geotechnics. Brief case studies will be used to illustrate the influence of geotechnics in the forestry, mining and the petroleum industries. Prerequisite: EASC 313 or permission of instructor.

EASC 416-3 Field Techniques in Hydrogeology
This course is intended to complement the theoretical aspects of hydrogeology by providing students with hands-on experience using hydrogeological equipment, and implementing sampling and testing protocols. The course involves a series of pre-field session assignments consisting of the analysis and interpretation of geophysical, geochemical and surficial geology data, and a week at a hydrogeology field site on the Fraser River delta, British Columbia. After the field work, students will conduct extensive analysis and interpretation of data gathered during the field session, complete exercises and prepare a written report. The course runs for about three weeks following the spring semester and is usually held shortly after. Prerequisite: EASC 204. Corequisite: EASC 410. Recommended: EASC 207 and/or 307. Quantitative.

EASC 418-1 Terrain Stability: Assessment and Mitigation
A field-based course dealing with site specific assessment of the areas to be logged or impacted by road construction. Topics covered will include terrain stability assessment field procedures, environmental impact and mitigation in forest terrains, forestry-related landforms, forest road construction and deactivation. Recommended: Terrain stability assessment. Prerequisite: EASC 313, 411 and 413.

EASC 419-1 Forest Harvesting Technology
A field-based course dealing with techniques used in the harvesting of timber; their impact and mitigation. Topics covered will include forest harvesting techniques (ground-based systems, cable systems, aerial systems, hand logging and horse logging), elements of operational logging (layout of cut blocks and road systems), and forest development plans. Prerequisite: EASC 313, 411 and 413.

EASC 420-3 Petroleum Geology
Elements of the petroleum system, including basin type, source rock origination, migration, trapping
mechanisms. Techniques used to identify and map potential hydrocarbon reservoirs in the subsurface, including geophysical methods, surface mapping, well log correlation, and core/chip sample descriptions will be discussed. This material will be presented in a context that demonstrates the life cycle of a hydrocarbon field from exploration (early), delineation (assessment), and production (mature) stages. Datasets available during different stages of development will be discussed in light of their pertinence to optimal reservoir performance. (2-0-3) Prerequisite: EASC 207, 302, 304, and 309, or permission of the instructor.

EASC 421-3 Volcanology

An introduction to physical and chemical volcanology through a comprehensive examination of volcanic eruptions and their consequences. The main topics covered are the rheological properties of magmas and lavas, structure of volcanic landforms, eruption dynamics, monitoring and hazard assessment, the emplacement of volcanic deposits, extraterrrestrial volcanism and the effects of eruptions on the environment. Prerequisite: EASC 205, 207 and 208.

EASC 491-1 Directed Readings

A course in which reading and research, and/or field work will be supervised by a faculty member. Prerequisite: 75 credit hours including 30 hours in earth sciences courses and permission of the department.

EASC 492-2 Directed Readings

A course in which reading and research, and/or field work will be supervised by a faculty member. Prerequisite: 75 credit hours including 30 hours in earth sciences courses and permission of the department.

EASC 493-3 Directed Readings

A course in which reading and research, and/or field work will be supervised by a faculty member. Prerequisite: 75 credit hours including 30 hours in earth sciences courses and permission of the department.

EASC 499-9 Honors Thesis

Will include experimental and/or theoretical research in earth sciences or a related discipline, and the preparation of a thesis (research report). Selection of a research topic and preparation of the thesis will be done in consultation with a faculty member in earth sciences. A research seminar will be delivered at the end of the semester. Prerequisite: 105 credit hours, admittance to the honors program and consent of a thesis supervisor.

EASC 600-0 Introduction to Graduate Studies

A required course designed to acquaint new graduate students with the research strengths of the program, research facilities in the University, and its vicinity. Procedures and policies relating to preparation, conduct and presentation of thesis research will be discussed.

EASC 603-3 Field Techniques in Hydrogeology

This course is intended to complement the theoretical aspects of physical hydrogeology and aqueous geochemistry covered at an undergraduate (or early MS) level by providing students with hands-on experience using hydrogeologic equipment (data loggers, pumps, chemical sampling equipment), implementing sampling and testing protocols, and observing state-of-the-art monitoring and geophysical tools. The course entails preparatory research and data interpretation on the hydrogeology of the Fraser delta (including surficial geology, regional geochemistry and geophysical characteristics), a week at a hydrogeology field site on the Fraser River delta (early May), the extensive analysis and interpretation of data gathered during the field session complemented with regional data acquired during preliminary investigations, the development of a large-scale simulation model of the groundwater flow system at the site, and the completion of a comprehensive hydrogeological report. The course normally runs for about three weeks following spring vacation for theses. Note: This course has limited enrollment. Prerequisite: undergraduate courses in physical and chemical hydrogeology (or equivalent) and consent of the department.

EASC 604-3 Deformation Mechanisms and Continental Tectonics

This course will focus on increasing the level of understanding of the mechanisms by which rocks deform and the effect of environmental variables (effective pressure, temperature, strain rate, chemical environment, etc.) on these deformation mechanisms. Lectures will cover flow concepts applied to ductile deformation, grain-scale to crustal-scale strain partitioning, and models of exhumation of metamorphic rocks. The link between far-field effects such as lithosphere rheology, climate and erosion, and relevant theory and practical experience to develop and test conceptual models, to recognize data requirements, and to identify the limitations of numerical models. State-of-the-art groundwater modelling software will be used. An emphasis is placed on modelling flow in the saturated zone, but unsaturated zone hydrology, solute transport, and density dependent flow are also covered.

EASC 613-3 Groundwater Modelling

An introduction to groundwater modelling providing the relevant theory and practical experience to develop and test conceptual models, to recognize data requirements, and to identify the limitations of numerical models. State-of-the-art groundwater modelling software will be used. An emphasis is placed on modelling flow in the saturated zone, but unsaturated zone hydrology, solute transport, and density dependent flow are also covered.

EASC 614-3 Subsurface Techniques

Advanced topics in subsurface exploration methods. Methods of drilling; core description and analysis; well logging.

EASC 615-3 Applied Geophysics

Instrumentation, application and limitations of electrical, seismic, radar and gravity methods in the exploration for mineral resources and in engineering applications.

EASC 616-3 Fluvial Systems

Field relations, nature and origin of metamorphic and metsomatic rocks, graphical treatment and modeling. Field exercises may be augmented by directed readings and laboratory studies. Course costs depend on the location and duration of field work and the nature of related investigations. Prerequisite: permission of instructor.

EASC 617-3 Exploration Seismology

Application of seismic methods of the delineation of hydrocarbon deposits and crustal structure. Travel time expressions for a layered Earth; Zoeppritz’ equations; 2-D and 3-D seismic surveying methods; reflection data processing, deconvolution and migration; amplitude versus offset methods and direct hydrocarbon detection; seismic wave propagation in Earth’s crust; refraction inversion; principles of seismic interpretation. Prerequisite: EASC 417 or equivalent.

EASC 618-3 Tectonics of Sedimentary Basins

Regional processes of subsidence and basin formation from a plate tectonics viewpoint. The course will examine the origins and general characteristics of convergent, divergent, intraplate and hybrid basins. Methods of discriminating basin origins from an understanding of depositional systems, stratigraphic analysis, provenance and compositional variations will be examined.

EASC 619-3 Environmental Geoscience

An examination of the concepts, methods and techniques used in advanced case studies of environmental geology, in fields including forestry, environmental geochemistry, earthquake and volcanic hazard, and urban planning.

EASC 620-3 Volcanology

Physical, chemical and tectonic aspects of volcanology examined with emphasis on processes of magma generation and evolution, styles of eruption, environments of deposition, and interpretation of volcanic facies. Prerequisite: undergraduate course in petrology and structural geology.

EASC 621-3 Tectonics and Magmatism

Convergent Plate Margins

Geological processes at convergent plate margins are considered in the context of plate tectonic principles. Topics to be addressed include: driving non-marine and marine processes of sedimentation and resultant depositional systems. The development of effective field criteria for the interpretation of the sedimentary record will be emphasized.

EASC 622-3 Stratigraphy

Stratigraphic concepts of biostratigraphy, biostratigraphy, chronostratigraphy and genetic stratigraphy. The course concentrates on genetic stratigraphy, with emphasis on allostratigraphy, genetic stratigraphic sequences and sequence stratigraphy. Students will critically assess each paradigm and its applicability to both the subdivision and the interpretation of the sedimentary record. Relative sea level changes and their effects on deposition will be discussed in relation to the preserved sedimentary record. Students will examine the utility of facies analysis in the various genetic stratigraphic frameworks and the viability of reconstructing the depositional history of sedimentary successions.

EASC 623-3 Field Methods in Earth Sciences

Focuses mainly on the field description, measurement and interpretation of geological, geochemical and geophysical features, and may concentrate on certain aspects of bedrock or surficial geology. Includes methods of data acquisition, display and modeling. Field exercises may be augmented by directed readings and laboratory studies. Course costs depend on the location and duration of field work and the nature of related investigations. Prerequisite: permission of instructor.

EASC 624-3 Sedimentology

Relative sea level changes and their effects on stratigraphy. Students will critically assess each genetic stratigraphic sequence and sequence stratigraphy, with emphasis on allostratigraphy, chronostratigraphy and genetic stratigraphy. The course concentrates on genetic stratigraphic sequences and sequence stratigraphy. Students will critically assess each paradigm and its applicability to both the subdivision and the interpretation of the sedimentary record. Relative sea level changes and their effects on deposition will be discussed in relation to the preserved sedimentary record. Students will examine the utility of facies analysis in the various genetic stratigraphic frameworks and the viability of reconstructing the depositional history of sedimentary successions.
forces of tectonic plates, mantle convection, geometry of subducted slabs, ridge-trench intersections, generation of volcanic arcs, causes of anomalous magmatism, accretion of terranes, and transpression of orogens and flexures. Prerequisite: undergraduate structural geology and petrology courses.

EASC 622-3 Principles of Ichnology
The conceptual framework of ichnology with particular emphasis on the ethological (behavioral) classification of biogenic structures, as well as its applications to the ichnological concept and paleoenvironmental interpretation of the sedimentary record. Environmental stresses and organism responses will be integrated with conventional sedimentology to highlight the complex inter-relationships between organisms and the environments they inhabit. The genetic stratigraphic applications of ichnology will also be addressed. Prerequisite: advanced undergraduate sedimentology course.

EASC 623-3 Groundwater Resource Evaluation
In addition to examining groundwater resources (exploration, evaluation and management), this course expands upon the theory and use of aquifer tests and their respective methods of analysis for evaluating groundwater resources. Advanced methodologies for partially penetrating wells, leaky aquifers, anisotropic aquifers, double porosity rock and fractured aquifers will be included. Computer applications will be emphasized. Prerequisite: undergraduate course in groundwater resources.

EASC 624-3 Geology of the Canadian Cordillera
The stratigraphy, structure and historical geology of the Canadian Cordillera, examined from a plate tectonic perspective. Models of development of the various terranes and related entities, and their amalgamation and evolution, from the research of the Cordilleran favorite, will be examined in detail. Prerequisite: An undergraduate background that includes courses at any level in structural geology, plate tectonics, geochemistry, geophysics, petrology (sedimentary, metamorphic, and igneous), plus permission from the instructor.

EASC 625-3 Issues in Canadian Cordillera Geology and Tectonics
A reading and seminar course on topics related to the development and ongoing evolution of the Canadian Cordillera. Topics will be based on both graduate student areas of interest and on current "hot topics" concerning this orogenic belt. One or more field trips might be conducted if there is sufficient interest and such trips would compliment the topics of discussion. Prerequisite: A graduate background that preferably includes courses at any level in structural geology, plate tectonics, geochemistry, geophysics, petrology (sedimentary, metamorphic, and igneous). This background will be assessed by the instructor, whose specific permission must be obtained before registration.

EASC 627-3 Carbonate Depositional Systems
Focusses on the modern and ancient carbonate depositional system, including platform geometry, grain types, diagenesis, porosity development, climatic influence, and eustatic influence. Petrology of outcrops, cores, and thin sections will be discussed and applied to characterization of carbonate systems in the subsurface. Presents a combination of academic theory and practical applications used in the petroleum industry, especially in directed study exercises. Mandatory weekend field trip to classic carbonate outcrops in western Canada. Prerequisite: permission of instructor.

EASC 703-3 Special Topics in Earth Sciences III

EASC 704-708-3 Special Topics
Prerequisite: permission of the instructor.

EASC 709-1 Directed Readings
Prerequisite: permission of the instructor.

EASC 710-2 Directed Readings
Prerequisite: permission of the instructor.

EASC 711-3 Directed Readings
Prerequisite: permission of the instructor.

EASC 898-6 MSc Thesis
EASC 100-901-1 PhD Research Seminar
Prerequisite: registration in PhD program.

EASC 998-6 PhD Thesis
Prerequisite: Registration in PhD Program.

Economics ECON

Faculty of Arts and Social Sciences

ECON 102-3 The World Economy
An overview of the broad economic trends in the development of the world economy over the last five decades with reference to the major debates related to economic interdependence, development and growth, globalization, and the role of the major multilateral economic institutions (IMF, World Bank, OCED, ILO, UN). (lecture/tutorial) Students with credit for Economics courses at the 200 (or higher) division (excluding ECON 200 and 205) may not take ECON 102 for further credit. Breadth-Social Sciences.

ECON 103-3 Principles of Microeconomics
The principal elements of the theory concerning utility and value, price and costs, factor analysis, productivity, labor organization, competition and monopoly, and the theory of the firm. Students with credit for ECON 200 cannot take ECON 103 for further credit. Quantitative/Breadth-Social Sciences.

ECON 104-3 Economics and Government
An introduction of broad, basic economic ideas applied to government finance, allocation, and procurement. Topics covered may include government size, health care, debt, social insurance, trade, and redistribution policies. Breadth-Social Sciences.

ECON 105-3 Principles of Macroeconomics
The principal elements of the theory concerning money and income, distribution, social accounts, public finance, international trade, comparative systems, and development. Students with credit for ECON 205 cannot take ECON 105 for further credit. Quantitative/Breadth-Social Sciences.

ECON 110-3 Foundations of Economic Ideas
A preliminary approach designed to familiarize students with economic ideas and methods of economic analysis. The focus will vary from semester to semester. Students with credit for ECON 100 cannot take ECON 110 for further credit. Breadth-Social Sciences.

ECON 208-3 History of Economic Thought
A study of the evolution of the major concepts of economic theory. Attention will be given to the relationship between doctrines and the economic, political, and social environment in which they developed. Prerequisite: ECON 103 or 200 and 105 or 205. Students with credit for ECON 308 may not take ECON 208 for further credit.

ECON 210-3 Money and Banking
Banking theory and practice in a Canadian context; the supply theory of money; the demand for money and credit creation; monetary policy in a centralized banking system and in relation to international finance. Advanced. Prerequisite: ECON 103 or 200 and 105 or 205. Students with credit for ECON 310 cannot take ECON 210 for further credit. Quantitative.

ECON 250-3 Economic Development in the Pre-Industrial Period
The pre-industrial period. History of the economic development of civilization from ancient times until the industrial revolution. Emphasis will be placed on the influence of geographical factors, discoveries and inventions, religion, and social organization and customs. Prerequisite: ECON 103 or 200 and ECON 105 or 205. Students with credit for ECON 150 cannot take ECON 250 for further credit. Quantitative.

ECON 260-3 Environmental Economics
Economic analysis of environmental problems (water and air pollution, etc.). Evaluation of market failures due to externalities and public goods. Market and non-market regulation of environmental problems. Prerequisite: ECON 100 or 200. Students with credit for ECON 360 cannot take this course for further credit. Quantitative.

ECON 278-3 Economics Practicum I
First semester of work experience in the Economics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 30 credits in Economics lower division requirements and completion of 45 semester hours at least 12 of which must be completed at Simon Fraser University, with a CGPA of 2.75. Students should apply to the Faculty of Arts and Social Sciences co-op co-ordinator by the end of the third week of the preceding semester.

ECON 279-3 Economics Practicum II
This is the second semester of work experience in the Economics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: Economics lower division requirements and completion of 45 semester hours at least 12 of which must be completed at Simon Fraser University, with a CGPA of 2.75. Students should apply to the Faculty of Arts and Social Sciences co-op co-ordinator by the end of the third week of the preceding semester.

ECON 282-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: to be determined by the instructor subject to approval by the department chair.

ECON 290-3 Canadian Microeconomic Policy
A general survey of Canadian microeconomic policy issues. The course covers topics such as regulation, taxation, environmental and resource policy, health care, education and income distribution. Prerequisite: ECON 103 or 200 and ECON 105 or 205. Quantitative.

ECON 291-3 Canadian Macroeconomic Policy
A general survey of Canadian macroeconomic policy issues. Topics will include the costs of inflation and unemployment, monetary and fiscal policy, the effects of government debt and exchange rate policy. Prerequisite: ECON 103 or 200 and ECON 105 or 205. Quantitative.

ECON 300-3 Introduction to Economic Concepts and Issues
The objective of this course is to introduce students to the economic approach to decision-making by individuals, firms and institutions. They will see how economic analysis can be used to interpret current economic issues and as an aid to the formation and evaluation of government policy. The course will focus on both microeconomic and macroeconomic concepts. Beyond exploring economic issues, the course will encourage critical thinking and develop problem-solving skills. Prerequisite: this course is available only to students who are registered in the Integrated Studies Program. Breadth-Social Sciences.
ECON 301-4 Microeconomic Theory I: Competitive Behavior
Aspects of microeconomic theory involving competitive markets. Topics include the behavior of households and firms, partial equilibrium analysis of product and factor markets, and general equilibrium.

ECON 302-4 Microeconomic Theory II: Strategic Behavior
Aspects of microeconomic theory concerned with strategic behavior, imperfect information, and market failure. Topics include game theory and oligopoly; uncertainty and insurance; asymmetric information and market power, externalities and public goods, together with related issues in welfare economics.

ECON 305-5 Intermediate Macroeconomic Theory
Concepts and methods of analysis of macroeconomic variables 7 consumption, investment, government and foreign trade. Classical and Keynesian models compared; analysis of economic statics and dynamics. Prerequisite: ECON 103 or 200; ECON 105 or 205; MATH 157; two 200 division ECON or BUCE courses (excluding BUCE 232), 60 credit hours. Students with a minimum grade of A- in both ECON 103 and ECON 105 can take ECON 305 after 30 credit hours and are not required to meet the 200 level ECON or BUCE course requirements. Students seeking permission to register based on ECON 103 and 105 grades must contact the Undergraduate Advisor in Economics. Quantitative.

ECON 309-5 Introduction to Marxian Economics
Examination of Marx’s economic theory, with particular emphasis on capital, theories of surplus value, and the Grundrisse. Consideration of earlier works as the basis for studying the above. Identification of the critical differences between Marxian economic theory and the dominant schools of economic theory in North America. Prerequisite: ECON 103 or 200 and 105 or 205, or permission of the department; 60 credit hours.

ECON 325-3 Industrial Organization
Introduces students to the economics of imperfect competition. Topics covered include the theory of the firm, market structure, and various aspects of firm strategy such as pricing, product differentiation, and innovation. Related questions of public policy will also be addressed. Prerequisite: ECON 301; 60 credit hours. Quantitative.

ECON 331-5 Introduction to Mathematical Economics
The mathematical interpretation of fundamental economic concepts; demand, supply, competitive equilibrium, application of the calculus to production and distribution theory, growth models and investment theory. Differential and difference equations in dynamic economic models. Introduction to activity analysis. Prerequisite: ECON 103, 105 and MATH 157 or 151; 60 credit hours. Students who have completed MATH 232 or 251 cannot take ECON 331 for further credit. Quantitative.

ECON 342-3 International Trade
Topics discussed in this course are: gains from trade in a classical world; the modern theory of international trade; factor price equalization; empirical tests and extensions of the pure theory model; economic growth and international trade; the nature and effects of protection; motives and welfare effects of factor movements; transfer payments; the brain drain; customs union theory; pollution control and international trade. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours or permission of the department. Students with credit for ECON 442 cannot take this course for further credit. Quantitative.

ECON 345-3 International Finance
Foreign exchange markets; determination of spot and forward exchange rates; Euro currency markets; balance of payments statistics; international adjustment theory; income price and exchange rate effects; the role of multinational short term capital flows; the international monetary system: gold standard, freely floating rates, dollar gold exchange standard, centrally created reserves. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours or permission of the department. Students with credit for ECON 445 cannot take this course for further credit. Quantitative.

ECON 353-4 Economic History of Canada
Analysis of leading issues in Canadian economic history. The historical experience of other areas will be examined when appropriate. Prerequisite: ECON 301; 60 credit hours.

ECON 354-3 Comparative Economic Institutions
People in small scale societies face numerous economic problems and have devised a variety of institutions to solve them. Using detailed case studies as a source of empirical information, we will develop economic concepts and models that help to make sense of these institutional arrangements. Prerequisite: ECON 103 and 105; 60 credit hours. Students who have taken ECON 387 in fall 1998 or fall 1999, or ECON 387W, fall 2003 may not take this course for further credit.

ECON 355W-4 Economic Development
Analysis of theories of economic development. Consideration will be given to the requirements of successful development, to aspects of international co-operation, and to procedures of economic planning. Problems of emerging countries and models of various developing economies will be studied. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours. Students with credit for ECON 455 may not take ECON 355 for further credit. Writing/Quantitative.

ECON 362-4 Economics of Natural Resources
Application of economic analysis to natural resource problems and efficient management practice; public policy considerations in respect to development and conservation; benefit-cost analysis. Prerequisite: ECON 301; 60 credit hours. Quantitative.

ECON 368-3 Regional Economic Analysis
Introduction to regional impact analysis. Analysis of economic models of industrial location and spatial equilibrium. Examination of regional growth theories and their policy implications. Presentation of techniques for analysis of regional economic structure and performance. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours. Students with credit for ECON 365 may not take this course for further credit.

ECON 378-3 Economics Practicum III
This is the third semester of work experience in the Economics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: economics lower division requirements and completion of 60 credit hours, at least 12 of which must be completed at Simon Fraser University with a CGPA of 2.75. Students should apply to the Faculty of Arts and Social Sciences co-op co-ordinator by the end of the third week of the preceding semester.

ECON 379-3 Economics Practicum IV
This is the last semester of work experience in the Economics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: ECON 301-4 or ECON 305-5 and 75 credit hours with a CGPA of 2.75. Students should apply to the Faculty of Arts and Social Sciences co-op co-ordinator by the end of the third week of the preceding semester.

ECON 381-3 Labor Economics
Analysis of the economics of the labor market with particular emphasis on wage determination, the concept of full employment, and manpower policies. Prerequisite: ECON 301; 60 credit hours. Quantitative.

ECON 382-383-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: to be determined by the instructor subject to approval by the department chair.

ECON 387-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: to be determined by the instructor subject to approval by the department chair.

ECON 388-3 Introduction to Law and Economics
An introduction to the economic analysis of law, emphasizing the concepts of transaction costs and property rights. A variety of topics will be analyzed, ranging from the allocative effects of alternative property rights to contract tort and nuisance law, out-of-court settlements and alternative legal fee structures. Prerequisite: ECON 103 or 200; ECON 105 or 205; 60 credit hours.

ECON 389-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: to be determined by the instructor subject to approval by the department chair.

ECON 390-3 Canadian Public Policy
Theories of government policy making as applied to the Canadian economy. Specifically, behavioral theories and current Canadian case studies are used to explore both private and public decision processes and the role of policy analysts in that context. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours. Quantitative.

ECON 392-3 Public Economics: Role of Government
The study of the normative rationale for government in a market economy through an analysis of distributional issues, public goods, externalities, non-competitive market structures, and asymmetric information. Prerequisite: ECON 301. Quantitative.

ECON 393-3 Public Economics: Taxation
The study of the public economics of taxation, including the efficiency and distributional aspects of taxation, the incentive effects of taxation, tax incidence, tax evasion and fiscal federalism. Prerequisite: ECON 301. Quantitative.

ECON 398-3 Directed Studies
Independent reading and research on topics selected in consultation with the supervising instructor. This course can only be taken once for credit towards a degree or diploma. Prerequisite: ECON 103 or 200 and ECON 105 or 205; 60 credit hours.

ECON 402-3 Advanced Microeconomic Theory
Advanced coverage of microeconomic theory for students intending to pursue graduate study in economics. Topics may include general equilibrium, game theory, and asymptotic information. (lecture) Prerequisite: ECON 302 and 331. Students who have completed both MATH 232 and MATH 251 may substitute these courses for ECON 301-4. Students who complete this course require a minimum CGPA of 3.0 or a
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ECON 403-3 Advanced Macroeconomic Theory
Advanced coverage of macroeconomic theory for students intending to pursue graduate study in economics. Topics may include economic growth, business cycles, and monetary theory. Prerequisite: ECON 302, 305 and 331. Students who have completed both MATH 232 and MATH 251 may substitute these courses for ECON 331. Entry into this course requires a minimum CGPA of 3.0 or a minimum grade of A- in both ECON 301 and BUEC 333. Students seeking permission to register based on 302 and 305 grades must contact the Undergraduate Advisor in Economics. Quantitative.

ECON 404-3 Methodology of the Social Sciences
Critical discussion of contemporary and original papers in the social sciences. Emphasis will be on the objectives, the logical aspects, and the testability of social science theories and models. Prerequisite: 70 credit hours.

ECON 409W-3 Seminar in Economic Thought
Consideration of particular economic theorists, schools of thought or themes in economic thought. Focus will vary from semester to semester. Prerequisite: ECON 301 and 305, or permission of the department; 60 credit hours. Writing.

ECON 410-3 Seminar in Monetary Theory
Analysis of money as an economic variable; role of money in micro and macroanalysis. Prerequisite: ECON 301 and 305. Quantitative.

ECON 425-3 Industrial Organization: Imperfect Competition
An in-depth examination of firm behavior in the context of imperfect competition. Topics covered may include: monopoly and oligopoly pricing; product differentiation; market power; entry deterrence; antitrust laws; and regulation. Emphasis will be given to covering a limited number of issues in detail rather than attempting a broad survey of industrial organization theories. Prerequisite: ECON 302.

ECON 426W-3 Industrial Organization: Governance and Institutions
A study of how markets, firms and other institutions are organized using information and transaction cost theories. Topics covered may include: theories of the firm (governance, structure, ownership, signaling and screening behavior); theories of non-market institutions (profit organizations, governments); institutional theories of growth and economic history; and the organization of markets (reputations, contracts, vertical control). Emphasis will be given to covering a limited number of issues and theoretical perspectives in detail rather than attempting a broad survey of new institutional economics. Prerequisite: ECON 302. Writing.

ECON 428-3 Seminar in Behavioral and Applied Economics
This is a research course covering topics in experimental economics, tests and economic behavior, and issues in applied economics. Experimental economic methods, results, and their implications for economic analyses will be reviewed. Individual projects will be designed and carried out by participants. Prerequisite: ECON 302 and 305. Quantitative.

ECON 431-5 Intermediate Mathematical Economics
The application of input-output studies, linear programming and the theory of games to economic analysis. Dynamic models, general equilibrium models and the mathematics of marginal analysis. Prerequisite: ECON 301, 305 and 331; 60 credit hours. Students who have completed MATH 232 and MATH 251 may substitute these courses for ECON 331. Quantitative.

ECON 435-5 Econometric Methods
The application of econometric techniques to the empirical investigation of economic issues. Prerequisite: ECON 301 and BUEC 333. Entry into this course requires a minimum CGPA of 3.0 or a minimum grade of A- in both ECON 301 and BUEC 333. Students seeking permission to register based on ECON 301 and BUEC 333 grades must contact the Undergraduate Advisor in Economics. Quantitative.

ECON 443-3 Seminar in International Trade
Focus will vary from semester to semester. Prerequisite: ECON 301, 305 and 342; or permission of the department; 60 credit hours. Quantitative.

ECON 448-3 Seminar in the Economics of Crime
Explores the economics of crime. Topics will include statistical information on crime, economic theories of crime, deterrence, organized crime and related topics. Prerequisite: ECON 302 and BUEC 333.

ECON 448W-3 Seminar in the Economics of Crime
Explores the economics of crime. Topics will include statistical information on crime, economic theories of crime, deterrence, organized crime and related topics. Prerequisite: ECON 302 and BUEC 333. Writing.

ECON 450W-3 Seminar in Quantitative Economic History
Focus will vary from semester to semester. Prerequisite: ECON 301 and 305. Writing/Quantitative.

ECON 451-3 Seminar in European Economic History
A detailed examination of the major issues in European economic history. Prerequisite: ECON 301 and 305; 60 credit hours. Students with credit for ECON 351 may not take ECON 451 for further credit.

ECON 452-3 Seminar in Economic Prehistory
Topics will vary but may include the biological evolution of economic preferences, economic behavior in hunting and gathering societies, the transition from foraging to agriculture, the emergence of inequality, hierarchy, warfare, cities, and the state, and mechanisms of social collapse. Prerequisite: ECON 302. Students who have taken ECON 482 in the summer of 2004 may not take this course for further credit.

ECON 452W-3 Seminar in Economic Prehistory
Topics will vary but may include the biological evolution of economic preferences, economic behavior in hunting and gathering societies, the transition from foraging to agriculture, the emergence of inequality, hierarchy, warfare, cities, and the state, and mechanisms of social collapse. Prerequisite: ECON 302. Students who have taken ECON 482 in the summer of 2004 may not take this course for further credit.

ECON 453-3 Seminar in the Economics of the Family
An economic analysis of behavior within the family, institutional aspects of the family, and the economic role of families. Topics include bargaining, household production, intra-family transfers, fertility, marriage, divorce and other topics like dowries, footbinding and mate matching behavior. Prerequisite: ECON 301. Students who have taken ECON 496 in spring 2006 may not take this course for further credit.

ECON 454W-3 Seminar in the Economics of the Family
An economic analysis of behavior within the family, institutional aspects of the family, and the economic role of families. Topics include bargaining, household production, intra-family transfers, fertility, marriage, divorce and other topics like dowries, footbinding and mate matching behavior. Prerequisite: ECON 301. Students who have taken ECON 496 in spring 2006 may not take this course for further credit.

ECON 455W-3 Seminar in Economic Development
Topics in economic development. Prerequisite: ECON 302 and 305. Writing/Quantitative.

ECON 460-3 Seminar in Environmental Economics
Focus will vary from semester to semester. Prerequisite: ECON 302. Quantitative.

ECON 478-3 Economics Practicum V
This is an optional semester of work experience in the Economics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: ECON 301, 305, one 400 division course and 90 credit hours and a CGPA of 2.75. Students should apply to the Faculty of Arts and Social Sciences co-op co-ordinator by the third week of the preceding semester.

ECON 480-3 Seminar in the Economics of Labor Market Policy
Seminar focusing on public policy as it relates to employment and income security. Special emphasis will vary from term to term, but may include such topics as examinations of current manpower, welfare and public insurance programs, labor legislation, and private institutional practices (such as union-management pension arrangements) that may affect income security. Prerequisite: BUEC 333 and ECON 381.

ECON 482-484-3 Selected Topics in Economics
The subject matter will vary from semester to semester depending upon the interests of faculty and students. Prerequisite: to be determined by the instructor subject to approval by the department chair.

ECON 490-3 Seminar in Public Choice
The application of economic theory to political market place. Topics may include the economics of constitutions, voting, democracy, bureaucracy, rent-seeking, and redistribution. Prerequisite: ECON 301 and 305; 60 credit hours. Quantitative.

ECON 492-3 Seminar in Public Economics
This seminar course considers topics such as the potential role for government through an analysis of distributional issues, public goods, externalities, non-competitive market structures, and asymmetric information. It may also include topics like the incentive effects of taxation, tax incidence, tax evasion and topics in fiscal federalism. Prerequisite: ECON 392 or 393 and ECON 302.

ECON 496-3 Selected Topics in Economics
The subject matter will vary from semester to semester depending upon the interests of faculty and
students. Prerequisite: to be determined by the instructor subject to approval by the department chair.

**ECON 498-3 Directed Studies**

Independent reading and research on topics selected in consultation with the supervising instructor. This course may not be repeated for additional credits. Prerequisite: ECON 301 and 305 and permission of the undergraduate chair of the department; 60 credit hours.

**ECON 499-6 Honors Seminar in Economics**

The purpose of this course is to permit the student to expand and develop a paper that has been prepared for a previous course into an honors paper. Prerequisite: ECON 302, 305, a minimum CGPA of 3.0; pre- or co-requisite: ECON 435. Joint Honors students may use ECON 301 in place of 302. Quantitative.

**ECON 750-0 Practicum I**

First semester of work experience in the Co-operative Education Program. Prerequisite: completion of core MA degree requirements of ECON 802, 807 (or 808), 835, and 836 with a minimum GPA of 3.0.

**ECON 751-0 Practicum II**

Second semester of work experience in the Co-operative Education Program. Prerequisite: ECON 750.

**ECON 752-0 Practicum III**

Third semester of work experience in the Co-operative Education Program. Prerequisite: ECON 751 and department approval.

**ECON 798-4 Introduction to Mathematical Economics**

Application and analysis of static optimization techniques, matrix algebra, differential and difference equations in economic models.

**ECON 802-4 Microeconomic Theory I**

An examination of the economic theory of market prices with reference to behavior of individual households, firms, and markets. Special emphasis will be placed on the implications of individual behavior for the allocation of resources. Prerequisite: ECON 331. Offered once a year.

**ECON 803-4 Microeconomic Theory II**

The course subsequent to ECON 802 which covers advanced Microeconomic theory on a dynamic and general equilibrium basis. Prerequisite: ECON 802. Offered once a year.

**ECON 804-4 Advanced Topics in Microeconomic Theory**

The course following ECON 802 and 803 which covers such topics as equilibrium theory, axiomatic analysis, stable income distribution, dynamic micro models, and models of non-market economics. Prerequisite: ECON 802 and 803 or equivalent.

**ECON 807-4 Macroeconomic Theory and Policy**

An examination of basic macroeconomic theory, empirical macroeconomic data and models, macroeconomic analysis, and application to economic developments and policy issues. Prerequisite: ECON 798 or equivalent. Offered once a year.

**ECON 808-4 Macroeconomic Theory**

An analysis of current theories of aggregate economic behavior. Topics covered in this course may include long-run growth, dynamic general equilibrium models, and business cycle analysis. Prerequisite: ECON 798 and 403 (or equivalent). Students who have taken ECON 805 cannot take ECON 808 for further credit. Offered once a year.

**ECON 809-4 Advanced Macroeconomic Theory**

This course covers advanced macroeconomic theory topics. Emphasis will be placed on current research techniques. Topics covered may include: capital and growth theory, real business cycle models, models of fiat money, asset pricing models, endogenous growth models, development traps, macroeconomic complementarities, co-ordination failures, and adaptive behavior in macroeconomic models. Prerequisite: ECON 808. Students who have taken ECON 806 cannot take 809 for further credit.

**ECON 810-4 Monetary Theory**

An examination of theories of the supply and demand for money in micro- and macro-contexts, from the classical analysis to the most recent developments. Emphasis will be placed upon the role of money in economic activity, the precise nature of its demand and supply conditions, and policy-implications of theoretical conclusions with regard to money.

**ECON 811-4 Advanced Monetary Theory**

Selected topics in monetary theory and policy.

**ECON 815-4 Portfolio Theory**

A study of optimum portfolio selections and diversification of financial assets including cash vis-a-vis different classes of utility functions of final wealth. Also, an examination of the behavior of speculative prices and rates of return. Prerequisite: ECON 331. Offered once a year. This is the same course as BUS 815.

**ECON 817-4 Theory of Capital Markets**

A study of capital market equilibrium theories, risk allocation, valuation models under perfect and imperfect markets and their empirical testing. Prerequisite: ECON 815. Offered once a year. This is the same course as BUS 817.

**ECON 818-4 Advanced Topics in Finance**

Extensions of advanced topics beyond those covered in BUED 815 and 817. Prerequisite: BUED 815, 817. This is the same course as BUS 818.

**ECON 825-4 Industrial Organization**

A presentation and critical examination of the industrial organization models; includes a review of mainstream and current theoretical literature, and important empirical work in the field. Prerequisite: ECON 802.

**ECON 826-4 Industrial Organization II**

This course examines topics specific to the theory of the firm. Classes will focus on theories of transaction cost, principal-agency, and the theory of contracts. Particular attention will be given to the strategic interaction of the agents.

**ECON 828-4 Experimental Economics**

The course will deal with experimental methodology and design. A number of topics will be covered in the three main areas of experimental economics: markets, games and strategic interaction, and individual decision-making. Students will be expected to design and conduct their own experiments under the supervision of the instructor.

**ECON 831-4 Mathematical Economics**

Various equilibrium models of micro and macro theory will be examined with emphasis on their solution, stability conditions and the uniqueness of solutions. Prerequisite: ECON 331.

**ECON 832-4 Computational Methods in Economics**

The first part of the course will focus on dynamic optimization problems, with an emphasis on dynamic programming. Applications may include growth, business cycles, monetary and fiscal policy, and optimal contract design. The second part of the course will focus on models of learning and bounded rationality. Genetic and stochastic approximation algorithms will be studied. Applications may include the stability of rational expectations equilibria, the evolution of institutions and social conventions, and models of robust control and Knightian uncertainty. Prerequisite: ECON 802, 807 or 808, or with the approval of the instructor.

**ECON 835-4 Econometrics**

An introduction to econometric theory. Applications of econometric methods to both time series and cross-section data. Prerequisite: ECON 435 and ECON 798. Offered once a year.

**ECON 836-4 Applied Econometrics**

A half-course in empirical econometric techniques for empirical investigation of economic issues. Prerequisite: ECON 835 or equivalent.

**ECON 837-4 Econometric Theory I**

The theory of the general linear model and the implications of basic econometric problems such as multicollinearity, autocorrelated residuals, errors in variables and heteroscedasticity. The use of dummy and lagged variables, simultaneous equation models. The identification problem. Estimation of over-identified equations. Prerequisite: ECON 835 or equivalent. Offered once a year.

**ECON 838-4 Econometric Theory IIA**

This course presents advanced topics in time series econometrics, with an emphasis on model building, estimation, inference and forecasts in finance and macroeconomics. Univariate and multivariate models of stationary and nonstationary time series in time and frequency domains will be studied. General topics will include specification testing, method of moments estimators, applications of maximum likelihood, simulation and bootstrap methods, and estimation and inference in nonlinear models. This will be presented in the context of ARIMA models, impulse-response functions, vector autoregressions and state space models, frequency domain methods, unit roots, cointegration, models of volatility, extreme value analysis and risk management, long-memory models, structural change, hidden-markov models, high frequency finance and wavelets. Prerequisite: ECON 837.

**ECON 839-4 Econometric Theory IIB**

Presents advanced topics in econometric theory in a microeconomic setting. Topics will include specification testing, method of moments estimators, applications of maximum likelihood, simulation and bootstrap methods, and estimation and inference in nonlinear models. These will be presented in the context of cross-sectional and panel data, including discrete choice models, limited-dependent variable models, and duration models. Prerequisite: ECON 837.

**ECON 840-4 Theory of International Trade**

The analytical course dealing with the pure theory of international trade. The motivation of supply and demand in international trade, the dynamic basis of trade, the role of the price mechanism and of income changes in international trade. Specific problems may be considered, such as the theoretical case for free and multilateral trade, and the theory of customs unions.

**ECON 842-4 International Monetary Economics**

Balance of payments theory, foreign exchange theory, and adjustment processes. A range of applied problems will be dealt with such as the operation of exchange rates, analysis of exchange rate systems, exchange control and the processes of short and long term capital movements in international trade.

**ECON 843-4 Current Problems in International Trade**

A detailed study of a limited number of international economic problems. The selection of topics will depend to some extent upon the expressed interests of the students.

**ECON 850-4 Methodology and Sources in Economic History**

A close examination of the work and methodology of leading economic historians. Study of methodology of selected works in economic history, with special...
emphasis on the identification of implicit theories and assumptions. Application of quantitative approaches and economic theory to selected problems. Independent work.

ECON 851-4 Economic History of Europe
An examination of theories and controversies from the transition from feudalism to capitalism. Comparative study of the emergence and subsequent evolution of industrialization. How economic institutions affect the character and pace of economic development. Regional disparities and economic growth in given countries. Relationship between economic growth and international expansion. Examination of declining sectors, stagnation, institutional changes in the 20th century.

ECON 853-4 Economic History of North America
Effects of the North Atlantic economy on the pace and character of Canadian and American economic development. The role of staple exports and the linkages to manufacturing and transportation developments. Canadian national policy, with emphasis on the region's effects, internal consistency and comparison to similar policies in the United States. Factors for growth and cyclical changes in the 20th century. In all the above areas, an attempt will be made to apply quantitative techniques of the new economic history to the problems of economic change.

ECON 854-4 Theories of Economic Development
Characterization of non-growing economies; mechanics of the process of economic development; the role of economic and non-economic factors; structural transformation in economic development.

ECON 856-4 Theories of Economic Growth
Equilibrium analysis and economic growth; determinants of growth; steady state and steady growth; technical progress and equilibrium growth. Prerequisite: ECON 608.

ECON 857-4 Studies in Economic Development
Examination of the characteristics of a given underdeveloped economy; allocation of resources and factor strategies; historical or contemporary comparisons of region's effects and development.

ECON 859-4 Population Economics

ECON 860-4 Environmental Economics
The analysis of the role of the natural environment in economic system. All economic activity creates waste products (pollution) which must be disposed of back into the natural environment. The socially efficient amount of waste generation and disposal is determined and methods of reaching this level evaluated. This involves the theoretical and empirical determination of the costs and benefits of waste generation and a thorough discussion of the role of government policies: taxes, standards, tradeable emissions permits versus private market initiatives (bargaining and green goods) under a variety of assumptions about the economic system.

ECON 861-4 Natural Resource Economics
Basic issues of intertemporal valuations. The economic theory of natural resource management for non-renewable resources, fisheries and forests. The effects of market structure and taxation on intertemporal supply patterns will be considered.

ECON 863-4 Fisheries Economics
Theoretical analysis of fisheries exploitation, emphasizing the characteristics of a common property resource and the economic expression of biological factors. Problems of productivity against the background of national fisheries regulations and international agreements. Public policies in respect of the fisheries, with their social and economic implications.

ECON 864-4 Studies in Economic Fisheries Management
Analysis of economic fisheries management techniques derived from the study of a variety of actual fisheries management projects. Prerequisite: ECON 603, or permission of the instructor.

ECON 865-4 Regional Economic Theory
The theoretical aspects of regional economics, particularly the following topics: the concept of a region, location theory, theories of regional economic growth, and techniques for regional analysis. Prerequisite: ECON 331 recommended.

ECON 867-4 Regional Development Problems
An applied course in regional economics. Topics include the following concepts of regional planning, development planning techniques, study of Canadian regional development problems. Prerequisite: ECON 865.

ECON 869-4 Transportation Economics
Emphasis on costs, demand and pricing of transportation services. Additional topics to be studied include government promotion of transport, transport regulation and the economic effects of transportation improvements. Recommended: ECON 331.

ECON 877-4 Methodology in Economic Theory
Topics to be discussed include theories of rationality; social theories involved in the economic concept of equilibrium; the role and status of economic theories and models; methodology versus sociology of economics; theories of economic knowledge; realism of assumptions and value premises in economics.

ECON 878-4 History of Economic Thought
Prior to 1870
The origins and development of economic thought from early times until 1870 with special emphasis on mercantilist, physiocratic, classical, Malthusian and socialist doctrines.

ECON 879-4 History of Economic Thought
Since 1870
The development of economic thought since 1870 will be examined with special emphasis on the evolution of marginal utility theory, general and partial equilibrium analysis, business cycle theories, Keynesian and post-Keynesian economics.

ECON 881-4 Labor Economics
Theoretical analysis of labor in the context of a national resource. Critical examination of the aspects of quantity, quality, allocation and utilization of human resources. Topics given particular attention include labor force participation, structural employment, human capital, incomes policies and the concept of an active manpower policy. Prerequisite: ECON 335.

ECON 884-4 Industrial Relations

ECON 888-4 The Economics of Legal Relationships
An analysis of the economic effects of constraints imposed by common, statute and constitutional law. Topics will include: transaction cost, common property, regulation, negligence and torts, ‘free' goods, price controls, non-profit agencies, crime and malfeasance, custom, nature of the firm under various legal guises and the anarchy state dichotomy.

ECON 889-4 Seminar in Law and Economics
An enquiry into the resource allocational and distributional implications of current and alternative legal arrangements. The economic rationale and effects of the development of various legal doctrines will be considered. Topics may include anti-competes legislation, compensation and public regulation, and market regulation for purposes of safety, consumer information and income maintenance of producers.

ECON 890-4 Public Economics: Expenditure
The study of the role of the public sector in a market economy. Topics may include social choice, issues of inequality, public goods, externalities, asymmetric information, and political economy.

ECON 891-4 The Economics of Public Choice
Applies economic theory to the analysis of non-market, political choice. Some of the topics studied will be coalition formation and rational voter behavior; allocations under various property rights systems; optimal constitutions; public sector economics; federalism; discrimination, nationalism and crime.

ECON 892-4 Public Economics: Taxation
The study of the public economics of taxation including income taxation, commodity taxation, and capital taxation. The focus is on the efficiency and distributional aspects of taxation. Additional topics include the incentive effects of taxation, tax incidence, tax evasion, tax competition, and fiscal federalism.

ECON 893-4 Introduction to Marxian Economics
Examination of Marx’s economic theory, with particular emphasis on capital, theories of surplus value and the Grundrisse.

ECON 895-4 Comparative Economic Systems
Comparative study of capitalist, communist, socialist and mixed forms of national economic organization, with emphasis on the allocation of resources and distribution of income.

ECON 900-0 PhD Field Paper
In the summer semester following the completion of a PhD student’s theory comprehensive exams, the student will enrol in this course. In consultations between the student, the graduate chair, and faculty, the student will be assigned a supervisor for the course. During the semester, the student will write a research paper in their field of interest. A satisfactory completion of the course is through the presentation of the paper as an economics department thesis proposal seminar. Graded as satisfactory or unsatisfactory.

ECON 911-913-4 Selected Topics in Economics
Offered by arrangement.

ECON 921-923-4 Directed Readings
Supervised reading in a particular field of specialization. Offered by arrangement.

ECON 990-6 PhD Thesis
ECON 991-6 MA Thesis
ECON 997-6 MA Exam
Prerequisite: ECON 802, 807 or 808, and 836 and significant written work in one or more MA courses (e.g. A term paper).

ECON 998-6 MA Essays
ECON 999-6 MA Project

Education EDUC
Faculty of Education
EDUC 100-3 Selected Questions and Issues in Education
An introduction to a small but representative sample of basic questions and issues in education. Students
will examine questions relating to: the concept or idea of education; learning and the learner; teaching and the teacher; and more generally, the broader contexts of education. This course also introduces students to different ways of exploring educational questions and issues from philosophical and critical analysis, to historical and cross-cultural studies, to empirical research. Cannot be taken for credit by students with credit for 300 and 400 level education courses.

**EDUC 100W-3 Selected Questions and Issues in Education**
An introduction to a small but representative sample of basic questions and issues in education. Students will examine questions relating to: the concept or idea of education; learning and the learner; teaching and the teacher; and more generally, the broader contexts of education. This course also introduces students to different ways of exploring educational questions and issues from philosophical and critical analysis, to historical and cross-cultural studies, to empirical research. Cannot be taken for credit by students with credit for 300 and 400 level education courses.

**Writing/Breadth-Humanities**

**EDUC 211-3 Mathematical Experience I: Numbers and Beyond**
Utility and aesthetics of mathematical experience is presented through the exploration of selected topics. Prerequisite: Students who have credit for MATH 151, MATH 154, MATH 157 need special permission to participate in EDUC 211 and EDUC 212.

Quantitative/Breadth-Science

**EDUC-H2-3 Mathematical Experience II: Shape and Size**
Utility and aesthetics of mathematical experience is presented through the exploration of selected topics. Prerequisite: Students who have credit for MATH 151, MATH 154, MATH 157 need special permission to participate in EDUC 211 and EDUC 212.

Quantitative/Breadth-Science

**EDUC 220-3 Introduction to Educational Psychology**
A survey of educational research and theories concerning motivation, learning, development, and individual differences in classroom settings. May be applied towards the certificate in liberal arts.

EDUC 222-3 Research Methods in Educational Psychology
An introductory survey of research methods used in developing and testing theories in educational psychology. Lecture topics are drawn from published research in educational psychology. Corequisite: EDUC 220-3 Quantitative.

**EDUC 230-3 Introduction to Philosophy of Education**
Provides prospective teachers and others interested in education an opportunity to examine a variety of educational problems from a philosophical perspective. The central concern of the course is to elucidate the nature of education as a phenomenon distinct from such activities as training, schooling, and socialization. May be applied towards the certificate in liberal arts. Breadth-Humanities.

**EDUC 240-3 Social Issues in Education**
Social functions of the school; education and socialization; social, political, economic and cultural influences on the institutions and practices of education. May be applied towards the certificate in liberal arts. Breadth-Humanities/Social Sciences.

**EDUC 250-3 Studies in the History of Education in the Western World**
A study of major trends in educational practice from antiquity to the present. May be applied towards the certificate in liberal arts. Breadth-Humanities/Social Sciences.

**EDUC 252-4 Introduction to Reflective Practice**
Provides opportunities for prospective educators to begin their development as reflective practitioners. Through readings, classroom activities and discussions, and interactions with students and practicing teachers, students will be exposed to various educational issues and questions. They will be given time to explore their own values and beliefs about education and teaching. Time may be spent observing in a selection of educational settings, and there may be opportunities to work with learners individually, and in small and large groups. Students with credit for EDUC 401 or holding a teaching certificate may not take this course for credit.

**EDUC 260-3 Learning and Teaching through Technology**
Provides a practical and theoretical exploration of technology use in K-12 classroom settings. Introduces current technologies that potentially impact student learning as well as a variety of issues and problems surrounding the use of learning technologies in schools. Also offers opportunities to explore technology-based innovations not yet broadly used in schools. Prerequisite: 30 credit hours.

**EDUC 260W-3 Learning and Teaching through Technology**
Provides a practical and theoretical exploration of technology use in K-12 classroom settings. Introduces current technologies that potentially impact student learning as well as a variety of issues and problems surrounding the use of learning technologies in schools. Also offers opportunities to explore technology-based innovations not yet broadly used in schools. Prerequisite: 30 credit hours. Writing.

**EDUC 298-299 Special Topics**
Course will explore issues of current concern. Subjects to be taught and the exact assignment of credit (2 or 3) will be announced prior to the beginning of each semester. Course may be on a pass/fail basis. Variable credit hours: 2, 3. A maximum of 12 credit hours in education special topics courses may be used towards a bachelor of education degree.

**EDUC 311-3 Foundations in Aboriginal Education, Language, and Culture**
An introduction to Aboriginal education in Canada and BC. There will be a critical examination of historical and contemporary issues in education and an exploration of culturally based Aboriginal education in Aboriginal philosophies. Prerequisite: 60 credit hours. Breadth-Humanities.

**EDUC 315-3 Individual and Developmental Differences in Language Acquisition**
A review of theories of language acquisition and their relationship to child communication disorders. Topics include: theories of language acquisition; individual and developmental differences in language acquisition; language structure and use in children with diverse disabilities, autism spectrum disorder, sensory disabilities and emotional and behavioral disabilities. Prerequisite: EDUC 220 or PSYC 250.

**EDUC 320-3 Instructional Psychology**
Examine theories of instruction and research about learning, motivation, individual differences, and social environments as foundations for designing instruction. Topics include: theories of cognition; models of motivation and beliefs; metacognition, self-regulated learning, and learning skills; problem solving and transfer; cognitive processing models of instruction in mathematics, science, social studies, reading and composition. Prerequisite: EDUC 220.

**EDUC 322-3 The Social Lives of School Children**
An overview of theory, research and practice concerning social emotional development and social interactions and relationships in the school context. Emphasis on the role of peer relationships in development and the role of the school in supporting positive interactions. Prerequisite: EDUC 220 or PSYC 250.

**EDUC 323-3 Introduction to Counselling Theories**
Survey of theories underlying counsellor and teacher interventions aimed at promoting emotional growth, development and personal change. Examination of theories and their sociological, cultural and philosophical contexts. Exploration of links between frequently used interventions and the implicit theories underlying these strategies. Students who have credit for EDUC 425 cannot take EDUC 323 for further credit. Prerequisite: EDUC 220 or equivalent, and 60 credit hours.

**EDUC 325-3 Assessment for Classroom Teaching**
A survey of assessment methods that contribute to improving teaching and learning, and for making judgements and decisions about qualities of teaching, the classroom environment, and student achievement and growth. Topics include: goal and task analysis, validity and reliability, observing and assessing classroom processes and environments, self-report methods, assessing student achievement, published tests of achievement and aptitude, and reporting. Prerequisite: EDUC 220.

**EDUC 326-3 Classroom Management and Discipline**
An examination of contemporary approaches to classroom management and discipline, including a consideration of legal, organizational and administrative issues. The major goal of the course is to enable students to comprehend the basic principles and tenets of a number of management approaches and to translate these principles into specific teaching strategies and skills. Prerequisite: EDUC 401/2 or one of EDUC 100, 220, 230, 240.

**EDUC 327-3 Self, Psychology and Education**
A critical examination of theoretical and empirical programs of inquiry in educational psychology that are concerned with the self (e.g., self-esteem, self-concept, self-directed or self-regulated learning). Students will participate in a wide-ranging seminar that considers topics such as the relationship between personal and social being, historical perspectives on the self, the formation of social identity, the roles of memory, imagination, and narrative inselkhip, the development of agency and self, and education and personhood. Prerequisite: 60 hours of credit, including one of EDUC 220, 230, 240 or 250.

**EDUC 328-3 Career Education and Career Counselling**
An introduction to theories of career choice, adjustment and development. Emphasis on critical evaluation of established theories that are influential in the development of career education curricula and in the practice of career counselling. Prerequisite: EDUC 220 or 401/402.

**EDUC 330-3 Movement Language Elements for Dance in Education**
In this experiential course students will develop an understanding of the movement concepts (action, space, time, force, relationship) which are the framework for making and teaching dance. This course will explore dance as a non-verbal expressive language, and will introduce students to a variety of aspects of dance within the curriculum. Previous dance training is not required. Prerequisite: 60 credit hours including six hours in EDUC courses.

**EDUC 339-3 Practicum 1**
First semester of work experience for the Faculty of Education Co-Operative Education Program.
EDUC 341-3 Literacy, Education and Culture
An introduction to the study of literacy from an interdisciplinary perspective, one which explores the role of literacy in social development, the economic and cultural values of literacy, and the effects of literacy on cognitive processes. The particular concern of this course is with the formal transmission of literacy in educational institutions. The course will especially address the varying conceptions of literacy that educators have traditionally valued, and the research that aims to explain, justify, and prescribe educational practices intended to increase literacy. This course is required for the certificate in literacy instruction. Prerequisite: 60 hours of credit.

EDUC 349-3 Practicum II
Second semester of work experience for the Faculty of Education Co-operative Education Program. Provides opportunity to integrate theory and practice. This course is open only to co-op students. The co-op coordinator must be contacted at the beginning of the semester prior to registration for this course. Credits from this course do not count towards the credits required for an SFU degree.

EDUC 351-3 Teaching the Older Adult
This is a basic course in adult education for students from all disciplines, of particular interest to those working (or preparing to work) with older adults. The goal is to assist students to develop more effective strategies for meeting the needs of an aging population through education. Prerequisite: 60 credit hours.

EDUC 352-4 Building on Reflective Practice
Building on the experience of EDUC 252, prospective educators will continue to develop their reflective practice. Various educational issues related to the caring for learners and the creation of learning communities will be explored. Students will spend time in educational settings exploring the importance of connected educational experiences for learners. Students with credit for EDUC 401 or holding a teaching certificate may not take this course for credit. Prerequisite: EDUC 252.

EDUC 355-4 Theatre in an Educational Context
Deals with the teaching of theatre in an educational context. It will develop knowledge of theatre skills, and a variety of approaches and techniques for teaching theatre and theatre in the schools. Prerequisite: 60 credit hours.

EDUC 358-3 Foundations of Educational Technology
A survey of major traditions of research and development in educational technology, including the arguments and assumptions they make about what constitutes a valuable educational outcome. Focus on analyzing and understanding educational technologies as cultural tools that are both shaped by, and in turn shape teaching and learning in K-12 schools. Prerequisite: EDUC 260.

EDUC 367-4 Teaching Children from Minority Language Backgrounds in Elementary Classrooms
For prospective or practicing elementary school teachers who are interested in enhancing educational practice for children of minority language backgrounds (those often labelled as ESL students) within the context of the mainstream classroom. Participants will consider theory and research in second language learning, examine recommendations for classroom practice and develop plans for practice relevant to their own educational milieu. Prerequisite: 60 hours of credit.

EDUC 370-4 International and Intercultural Education
Practical and theoretical approaches to international and intercultural education, including examinations of the relationships between culture, learning and schooling, and contemporary issues in teacher education from an international perspective. (4-0-0) Prerequisite: Completion of at least 60 credits, including 3 credits in Education.

EDUC 371-4 School Health Education
Explores health concepts, health behaviors, and health concerns of school-aged children and youth. Focuses on comprehensive and co-ordinated school health programs, innovative instructional strategies, and health-promotion initiatives to create healthy school communities. Prerequisite: 60 credit hours; or permission of instructor.

EDUC 371W-4 School Health Education
Explores health concepts, health behaviors, and health concerns of school-aged children and youth. Focuses on comprehensive and co-ordinated school health programs, innovative instructional strategies, and health-promotion initiatives to create healthy school communities. Prerequisite: 60 credit hours; or permission of instructor. Writing.

EDUC 378-3 Teaching Core French with Special Emphasis on Authentic Documents
A modern language methodology course that beginning teachers acquire the skills to teach a basic Core French program. The course will begin at SFU and be completed at Laval University in Quebec City. Special emphasis will be placed on the practical use of authentic documents. Prerequisite: EDUC 401/402. Corequisite: EDUC 480 or 481. Basic knowledge of French recommended.

EDUC 380-4 Introduction to Teaching French in Canadian Contexts
For students contemplating becoming teachers of immersion, Core French at the secondary level, or for intermediate and middle school generalists who want to have an introductory overview of second language teaching in general and French education in British Columbia specifically. The general objective is to help prospective French teachers to better understand Canadian bilingualism, its historical, sociopolitical and cultural context, as well as gain a basic understanding of French education programs in British Columbia. The language of instruction will be French, but the class will Deals with... Prerequisite: FREN 301, 304, 370 or equivalent.

EDUC 382-4 Diversity in Education: Theories, Policies, Practices
An examination of the impact of social diversity on schooling in Canada exploring contemporary issues and perspectives on diversity education as they relate to cultural, ethnic, racial, linguistic, religious, economic, and gender differences. (0/4/0) Prerequisite: 60 hours of credit. Students who have received credit for EDUC 441, EDUC 382-4 Special Topics from fall 2003-3 on, cannot take EDUC 382 for further credit.

EDUC 383-384 Special Topics
Explores major issues of present concern. Subjects to be taught and the exact assignment of credit and prerequisites will be announced prior to the beginning of each semester. Course may be given on a pass/fail basis. A maximum of 12 credit hours in Education Special Topics course may be used toward a bachelor of education degree. Variable credit hours 2, 3, 4, 6.

EDUC 391-3 Special Topics
Course will explore major issues of present concern. Subjects to be taught and the exact assignment of credit and prerequisites will be announced prior to the beginning of each semester. Course may be given on a pass/fail basis. A maximum of 12 credit hours in Education Special Topics courses may be used toward a bachelor of education degree. Variable credit hours: 2, 3, 4, 6.

EDUC 399-4 Special Topics
Course will explore major issues of present concern. Subjects to be taught and the exact assignment of credit and prerequisites will be announced prior to the beginning of each semester. Course may be given on a pass/fail basis. A maximum of 12 credit hours in Education Special Topics courses may be used toward a bachelor of education degree. Variable credit hours: 2, 3, 4, 6.

EDUC 401-8 Introduction to Classroom Teaching
A half semester of observation and experience in a BC school during which two students work as a team with a teacher selected by school authorities and appointed by Simon Fraser University as a school associate. Students observe, teach and participate in school routines and programs. Grading is on a pass/withdraw basis. (Not offered in summer semester.)

EDUC 401W-8 Introduction to Classroom Teaching
A half semester of observation and experience in a BC school during which two students work as a team with a teacher selected by school authorities and appointed by Simon Fraser University as a school associate. Students observe, teach and participate in school routines and programs. Grading is on a pass/withdraw basis. Writing.

EDUC 402-7 Studies of Educational Theory and Practice
A half semester of study which provides students with workshops, seminars, and lectures designed to introduce them to the curriculum and methods appropriate for the age/grade level in which they expect to teach. Students will also be given an introduction to generic teaching skills, as well as to current issues in educational theory and practice. Grading is on a pass/withdraw basis. (Not offered in summer semester.) Corequisite: EDUC 401.

EDUC 402W-7 Studies of Educational Theory and Practice
A half semester of study which provides students with workshops, seminars, and lectures designed to introduce them to the curriculum and methods appropriate for the age/grade level in which they expect to teach. Students will also be given an introduction to generic teaching skills, as well as to current issues in educational theory and practice. Grading is on a pass/withdraw basis. Corequisite: EDUC 401. Writing.

EDUC 404-0 Coursework Semester
Students undertake 15 upper division credits of studies in Education to complete the professional development program requirements. Prerequisite: EDUC 401/402.

EDUC 405-15 Teaching Semester
A full semester of classroom experience supervised by University appointed school associates. The school placement is appropriate to the grade level and subject specialties which the student expects to teach after graduation. Grading is on a pass/withdraw basis. (Not offered in summer semester.) Prerequisite: EDUC 401/402.
EDUC 406-12 Supervised Observation and Teaching
Education 406 is designed for those who need to meet BC certification requirements. It is a supervised orientation to teaching in schools for approximately ten weeks, in a BC public school. This practicum is designed as an opportunity to familiarize students with the British Columbia school system and update their teaching skills. Prerequisite: permission will not be given to students without previous teaching experience. Grading will be on a pass/withdrawal basis. Students with credit for EDUC 407 may not take EDUC 406. EDUC 406 is not applicable toward the credit requirements for a degree or diploma, i.e. not counted in total credits.

EDUC 411-3 Investigations in Mathematics for Secondary Teachers
Students examine secondary mathematics from an advanced standpoint, focusing on problem solving, investigating connections among various topics and representing mathematical topics and concepts within a broader context. Prerequisite or Corequisite: EDUC 415 or appropriate math background and permission of instructor. Quantitative.

EDUC 412-4 Design for Learning: Secondary Language Arts
Focuses on teaching secondary school language arts and addresses aspects of the theory and practice of language arts education. Students examine their own thinking about language arts education through critical reflection, work with the prescribed curriculum, and explore various ways to develop engaging learning experiences for young adults within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 411 and EDUC 472 prior to the 2001-2 semester cannot take EDUC 412 for further credit.

EDUC 412W-4 Design for Learning: Secondary Language Arts
Focuses on teaching secondary school language arts and addresses aspects of the theory and practice of language arts education. Students examine their own thinking about language arts education through critical reflection, work with the prescribed curriculum, and explore various ways to develop engaging learning experiences for young adults within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 411 and EDUC 472 prior to the 2001-2 semester cannot take EDUC 412 for further credit. Writing.

EDUC 414-4 Designs for Learning: Secondary Social Studies
Focuses on teaching secondary school social studies and addresses aspects of the theory and practice of social studies education. Students examine their own thinking about social studies education through critical reflection, work with the prescribed curriculum, and explore various ways to develop engaging learning experiences for young adults within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 411 and EDUC 472 prior to the 2001-2 semester cannot take EDUC 414 for further credit.

EDUC 415-4 Designs for Learning: Secondary Mathematics
Focuses on teaching secondary school mathematics. Students explore mathematical learning, their own mathematical thinking and curriculum; and plan mathematical instruction within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 411 and EDUC 472 prior to the 2001-2 semester cannot take EDUC 415 for further credit. Quantitative.

EDUC 416-4 Designs for Learning: Secondary Science
Focuses on teaching secondary school science. Students explore the sciences and aspects of learning science; examine their own scientific thinking; work with the prescribed curriculum; and plan science learning experiences within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 411 and EDUC 472 prior to the 2001-2 semester cannot take EDUC 416 for further credit.

EDUC 422-4 Learning Disabilities
A study of conceptual and historic foundations of learning disabilities and an introduction to the methodologies of diagnosis and of learning disabilities. Prerequisite: EDUC 315 or PSYC 250.

EDUC 423-4 Helping Relationships
Introduction to the rationale for and the practice of basic counselling skills. Emphasis on the development of counselling skills as a means of establishing effective helping relationships in educational settings. Prerequisite or Corequisite: EDUC 333.

EDUC 424-4 Learning Disabilities: Laboratory Supervised experience in analysis and evaluation of treatment strategies to be used with classroom students having learning disabilities. Prerequisite or Corequisite: EDUC 422.

EDUC 426-4 Teaching Children and Youth with Special Needs
An introduction to the field of special education including studies of the definitional criteria and characteristics of major categories of special need, and the distinctive instructional challenges associated with these categories. The course focuses on the special learning needs of school age students, both elementary and secondary school levels, and emphasizes both the analysis of issues and treatment needs across the array of special needs. Prerequisite: 60 hours of credit.

EDUC 427-4 Teaching Students with Special Needs in Inclusive Settings
A review of classroom teaching practices that support learning for children with high-incidence disabilities (e.g., learning disabilities, Attention Deficit Disorder, mild intellectual disabilities, moderate behavior disorders). Topics include: introduction to inclusive teaching, collaboration partnerships and procedures, teaching students with high-incidence disabilities, developing effective teaching skills, improving classroom behavioral skills, promoting inclusion with peers, enhancing motivation and affect, assessment and teaching in the content areas. Prerequisite: EDUC 422 and either 401I or permission of the instructor for students with experience working with children with high-incidence disabilities.

EDUC 428-4 Nature and Nurture of Gifted Students
Concepts and practices related to the nature and nurture of the potential for giftedness in educational settings will be introduced. Theoretical and historical foundations of common practices in gifted education will be covered. Grading will be on a pass/fail basis. Prerequisite: EDUC 220 or PSYC 250 or PSYC 302 and EDUC 401 and 402.

EDUC 428W-4 Nature and Nurture of Gifted Students
Concepts and practices related to the nature and nurture of the potential for giftedness in educational settings will be introduced. Theoretical and historical foundations of common practices in gifted education will be covered. Grading will be on a pass/fail basis. Prerequisite: EDUC 220 or PSYC 250 or PSYC 302 and EDUC 401 and 402. Writing.

EDUC 430-4 Designs for Learning: Dance
For students and teachers with some movement and dance experience who are planning to teach dance in school or recreational settings. Students will continue exploring dance and theoretical sequences of movement language framework concepts with increasing emphasis on expressive, formal and critical aspects of dance and movement education. Prerequisite: EDUC 401 and 402.

EDUC 433-4 Philosophical Issues in Curriculum
Examines fundamental philosophical issues involved in designing, evaluating, or changing educational curricula. Such issues as the nature and justification of educational curriculum, the components of a rational curriculum, the nature of knowledge and its differentiation, curriculum integration and the education of the emotions. Also deals with current issues as the place of behavioral objectives in education, the hidden curriculum and the sociology of knowledge. Prerequisite: 60 credit hours including 6 hours in EDUC courses or EDUC 401 and 402.

EDUC 435-4 Infusing Global Perspectives into Curriculum
An examination of the rationale for and concepts of global education including its content, methods and specific objectives, and its place in existing provincial curricula. (4-0-0) Prerequisite/Corequisite: EDUC 370.

EDUC 437-4 Ethical Issues in Education
Ethical problems in education are identified and examined. Four major areas of concern are explored: 1. the normative character of education as a whole; 2. the justification of education; 3. ethical questions related to equality, autonomy, interpersonal relationships, and rights in education; 4. moral education and values education. Prerequisite: EDUC 230 or EDUC 401 and 402 or permission of the instructor.

EDUC 439-3 Practicum III
Third semester of work experience for the Faculty of Education Co-operative Education Program. Provides opportunity to integrate theory and practice. This course is open only to co-op students. The co-op coordinator must be contacted at the beginning of the semester prior to registration for this course. Credits from this course do not count towards the credits required for an SFU degree.

EDUC 441-4 Multicultural and Anti-racist Education
Focuses on developing approaches for multicultural and anti-racist teaching. Topics include: diversity of race, culture and language; cultural learning; and pedagogy; identify the operation of racism, prejudice and discrimination in classrooms and schools; becoming familiar with a variety of approaches such as: co-operative learning, culturally appropriate assessment, and community involvement to counteract and prevent negative classroom and school dynamics; identifying bias in curriculum resources; and locating entry points in selected curriculum areas (e.g. language arts, social studies, art, music, etc.) for integrating approaches which employ a range of multicultural/anti-racist curriculum resources. Prerequisite: EDUC 240 or SA 333, and EDUC 401 and 402.

EDUC 445-4 Legal Context of Teaching
Designed to provide education students, teachers, counsellors and school administrators with a comprehensive understanding of the legal issues and potential legal liabilities encountered in the BC public school system. Special attention is devoted to the legal dimensions and consequences of routine classroom and administrative activity. Topics include: sexual abuse by school board employees; negligence and supervision; private lifestyles and community standards; discipline and corporal punishment; sexual harassment in the workplace; responsibility for curriculum fulfillment; liability outside school hours;
and the AIDS controversy. Prerequisite: 60 hours of credit including 6 hours in Education courses.

EDUC 446-4 Law for the Classroom Teacher
Provides teachers with the necessary background understanding of the law and legal practices required to teach. Issues addressed will be drawn from the BC curricula. The major focus will be on the areas of law, and legal concepts and procedures included in the secondary social studies and law 12 curriculum. Prerequisite: 60 hours of credit including 6 hours in Education courses.

EDUC 448-4 Teaching about Justice, Law and Citizenship
The justification and practice of law-related education in the K-12 curriculum are the subjects of this methodology course. Students will examine the place of law in the curriculum, existing resources and appropriate teaching strategies and will have the opportunity to develop unit plans and curriculum materials. Emphasis is on developing and implementing law-related programs in the classroom. Prerequisite: 60 credit hours including six in education courses. Teaching experience is recommended.

EDUC 449-3 Practicum IV
Fourth semester of work experience for the Faculty of Education Co-operative Education Program. Provides opportunity to integrate theory and practice. This course is open only to co-op students. The co-op coordinator must be contacted at the beginning of the semester prior to registration for this course. Credits from this course do not count towards the credits required for an SFU degree.

EDUC 450-4 Classroom French Curriculum Studies
Intended for students who would like to gain a broader view of the French second language teacher profession while improving their knowledge of the language and culture in a classroom context. The general objective of this course is to help prospective French teachers to better understand the pedagogical relevance of and the relationship between cultural competence and communicative competence. Prerequisite: When the course is offered in French, 60 hours of credit and 12 credits of French or equivalent. When the course is offered in English, 60 hours of credit.

EDUC 451-4 Classroom French Curriculum Practices
Helps prospective and practicing French teachers better understand the pedagogical and cultural relevance of a variety of French language registers and of their significance to second language teaching. Prerequisite: When the course is offered in French, 60 hours of credit and 12 credits of French or equivalent. When the course is offered in English, 60 hours of credit.

EDUC 452-8 Environmental Education
Examines the educational problems involved in developing human awareness and understanding of the environment. Explores environmental issues through a multi-disciplinary approach and relates historical and contemporary problems in human-environment interactions to school curricula from the elementary to the secondary level. Includes a laboratory component. Grading will be on a pass/fail basis. A 46 field activity fee will be levied in this course. Normally offered in summer session only. Prerequisite: EDUC 401/402. Breadth-Science.

EDUC 456-4 Models of Contemporary Arts in Education
Major conceptions of educational value in the contemporary arts and application of these ideas to the development of visual arts programs in the schools. Prerequisite: 60 hours of credit.

EDUC 457-4 Drama and Education
Deals with theory, curricula and methodologies in drama education. Topics will include a selection from the following: aims of drama education; drama as methodology; role of the teacher in the drama classroom; evaluating students in drama classes; creative drama; the use of improvisation and storytelling; incorporating film and video work into drama classes; developing major projects with students such as choral dramatization, docudrama, anthology, and readers theatre; introducing scene work, stagecraft, and theatre history. Prerequisite: EDUC 401/402.

EDUC 459-4 Instructional Activities in Physical Education
Focuses on theory and curriculum of school physical education programs. Emphasis is given to the movement education orientation as it pertains to the various program activities and approaches applicable to primary, intermediate and secondary levels. Prerequisite: EDUC 401/402.

EDUC 463-4 Multimedia for Curriculum Design
Evaluation of the use of multimedia software packages in relation to important curricular and instructional issues. A secondary focus will be the student design and production of a multimedia package for use in education. Prerequisite: EDUC 260 or permission of instructor.

EDUC 464-4 Early Childhood Education
Current trends, issues and research relating to the education of young children. Prerequisite: EDUC 410/412 or PSYC 250.

EDUC 465-4 Children’s Literature
Historical, sociological and literary perspectives on literature for children. Prerequisite: 60 hours of credit.

EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
Students will learn to use English language teaching grammar appropriately, to evaluate and use methods of teaching English as a second language, to do error analyses, and to adapt commercial programmes to the specific needs of learners. Designed for teachers and prospective teachers. Prerequisite: 60 hours of credit and ENGL 370 or a linguistics course.

EDUC 468-4 Cognition and Language in ESL Instruction
Cognitive approaches to second language learning; syntactic and vocabulary differences in content-area subjects; language learning strategies; visual literacy; self-directed language learning. Prerequisite: 60 hours of credit and one linguistics course.

EDUC 469-4 Music Education as Thinking in Sound
Understanding the language of music, both historical and contemporary, and use of electronic and acoustic instruments in the general music classroom. Prerequisite: 60 hours of credit.

EDUC 471-4 Curriculum Development: Theory and Practice
Explorations of curriculum theory and processes of development with applications at different levels and in several subject areas. Prerequisite: 60 hours of credit.

EDUC 472-4 Designs for Learning: Elementary Language Arts
Focuses on developing knowledge, skills and strategies to create a rich and stimulating language arts program in the elementary classroom. Issues in reading, writing, speaking and listening will be examined through current theory and teaching practice. Prerequisite: EDUC 401/402. Students who have credit for EDUC 472 prior to 2001-2 semester cannot take EDUC 472 for further credit.

EDUC 472W-4 Designs for Learning: Elementary Language Arts
Focuses on developing knowledge, skills and strategies to create a rich and stimulating language arts program in the elementary classroom. Issues in reading, writing, speaking and listening will be examined through current theory and teaching practice. Prerequisite: EDUC 401/402. Students who have credit for EDUC 472 prior to 2001-2 semester cannot take EDUC 472 for further credit. Writing.

EDUC 473-4 Designs for Learning: Reading
Offers theoretical and practical information about teaching reading in K-12 general education settings. Prerequisite: EDUC 401/402.

EDUC 473W-4 Designs for Learning: Reading
Offers theoretical and practical information about teaching reading in K-12 general education settings. Prerequisite: EDUC 401/402. Writing.

EDUC 474-4 Designs for Learning: Elementary Social Studies
Focuses on teaching elementary school social studies and addresses aspects of the theory and practice of social studies education. Students examine their own thinking about social studies education through critical reflection, work with the prescribed curriculum, and explore various ways to develop engaging learning experiences for children within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 401/402. Students who have credit for EDUC 474 prior to 2001-2 semester cannot take EDUC 474 for further credit. Students with credit for EDUC 414 cannot take EDUC 474 for further credit.

EDUC 474-4 Designs for Learning: Elementary Social Studies
Focuses on teaching elementary school mathematics. Students explore mathematical learning, their own mathematical thinking, and curriculum; and plan mathematical instruction within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 401/402. Students who have credit for EDUC 474 prior to 2001-2 semester cannot take EDUC 475 for further credit. Quantitative.

EDUC 474-4 Designs for Learning: Elementary Science
Focuses on teaching elementary school science. Students explore science, aspects of learning science, and their own scientific thinking; work with the prescribed curriculum; and plan science learning experiences within a consistent framework using appropriate instructional materials and methods. Prerequisite: EDUC 401/402. Students who have credit for EDUC 476 prior to 2001-2 semester cannot take EDUC 476 for further credit.

EDUC 477-4 Designs for Learning: Art
Introduces students to the main ideas, skills, materials, resources, understandings and organizational concerns involved in teaching art in schools. Prerequisite: EDUC 401/402.

EDUC 478-4 Designs for Learning: Music
Designed for in-service and pre-service teachers who would like to acquire the skills that will allow them to teach music competently and creatively. They will learn basic conducting techniques, design their own curriculums and have an opportunity to prepare and teach their own lesson plans. Previous musical experience is welcome, but not required. Prerequisite: EDUC 401/402.

EDUC 479-4 Designs for Learning: Physical Education
Consideration is given to the pedagogical principles underlying the development of inclusive physical programs at the primary, intermediate and secondary levels. Involves practical consideration of instructional strategies and curriculum planning in physical education.
EDUC 480W-4 Designs for Learning: French as a Second Language
Deals with a variety of approaches, teaching strategies and curricula, for teaching French as a second language in elementary and secondary schools. Prerequisite: EDUC 401/402. Instruction given in French.

EDUC 481W-4 Designs for Learning: French Immersion Programs and Francophone Schools
Focuses on research and theories of language learning in bilingual programs and minority contexts, pedagogical approaches and curricula for teaching in French Immersion programs and Francophone elementary and secondary schools. Prerequisite: EDUC 401/402 (French Immersion). Instruction given in French.

EDUC 482-4 Designs for Learning: Information Technology
Students will develop a critical understanding of information technologies in education and learn how to integrate these technologies into classroom settings. An emphasis is on teaching strategies and methods as they complement the guidelines set forth in the BC Information Technology Curriculum. Prerequisite: EDUC 260 and 401/402 or permission of instructor.

EDUC 483-8 Designs for Learning: Curriculum Studies
Development of conceptual and technical skills through workshops, seminars, and directed and independent study. Deals with human development and learning in the school. Stress will be placed on approaches to individualizing instruction and to integrating the curriculum in different subject areas. It will normally be taught by two or more faculty members. Prerequisite: EDUC 401/402.

EDUC 485W-8 Designs for Learning: Writing
Designed to help students become better teachers of writing. Students will be involved in four aspects of teaching writing: teacher as writer, teacher as teacher of writing skills, teacher as researcher, teacher as developer of curriculum. Techniques for providing effective writing experiences will be studied, demonstrated and practised. Students will observe, use and evaluate these techniques. Course content: teacher as writer -- writing skills, audience, purpose, writing process, self-evaluation. Teaching writing -- research, skill acquisition, self-disclosure, risk and creativity, thought and discipline, evaluation. Teacher as researcher -- reflective observation, analysis of data, program evaluation, peer support systems. Teacher as developer of curriculum -- student writing, drama, literature, use of texts. Prerequisite: EDUC 401/402.

EDUC 485W-8 Designs for Learning: Writing
Designed to help students become better teachers of writing. Students will be involved in four aspects of teaching writing: teacher as writer, teacher as teacher of writing skills, teacher as researcher, teacher as developer of curriculum. Techniques for providing effective writing experiences will be studied, demonstrated and practised. Students will observe, use and evaluate these techniques. Course content: teacher as writer -- writing skills, audience, purpose, writing process, self-evaluation. Teaching writing -- research, skill acquisition, self-disclosure, risk and creativity, thought and discipline, evaluation. Teacher as researcher -- reflective observation, analysis of data, program evaluation, peer support systems. Teacher as developer of curriculum -- student writing, drama, literature, use of texts. Prerequisite: EDUC 401/402.

EDUC 486-488 Special Topics
Sections will deal with major issues of present concern. Subjects to be discussed will be announced during the semester prior to that in which the course is to be offered. The exact assignment of credit hours (3, 4, or 6) and prerequisites for the special topics offering will be announced prior to the beginning of each semester. A maximum of 12 credit hours in education special topics courses may be used toward a bachelor of education degree. Variable credit hours 3, 4, 6.

EDUC 490-492 Directed Study
Directed study in education under the supervision of a faculty member. Prerequisite: 60 credit hours and a CGPA of 3.0, consent of supervising faculty member, and approval of the director of undergraduate programs. A maximum of three directed studies courses will be approved for a maximum of 12 credits. Directed studies courses may not parallel regularly taught courses. A student may take a maximum of two directed studies courses with the same faculty member. Applications are available in the undergraduate programs office. Variable credit hours 2, 4.

EDUC 493-4 Directed Studies in Environmental Education
A multidisciplinary approach for educators in formal and informal settings with an interest in learning more about environmental issues. Students will consider multiple perspectives. Course content: values and an interdisciplinary nature of environmental education, review locally available curricular materials and obtain a grounding in appropriate models for learning and teaching environmental topics. Prerequisite: 60 credit hours and a CGPA of 3.0. EDUC 450 consent of supervising faculty member, and approval of the director of undergraduate programs. Applications are available in the undergraduate programs office. Variable credit hours 2, 4.

EDUC 495-498 Special Topics
Sections will deal with major issues of present concern. Subjects to be discussed will be announced during the semester prior to that in which the course is to be offered. The exact assignment of credit hours (3, 4, or 6) for the special topics offering will be announced prior to the beginning of each semester. Prerequisite: this will be announced prior to the beginning of each semester. A maximum of 12 hours in education special topics courses may be used toward a bachelor of education degree. Please refer to SA 333 Sociology of Education, as this course is also accepted as education credit. Variable credit hours 3, 4, 6.

EDUC 720-2 Directed Readings
EDUC 703-3 Directed Readings
EDUC 704-4 Directed Readings
EDUC 705-5 Directed Readings
EDUC 710-714 Special Topics
Variable credit hours 3, 4, 5.
critical) in which research examining administrative processes is conducted. Topical issues and problems will be explored within the conceptual framework of the course.

EDUC 816-5 Developing Educational Programs and Practices for Diverse Educational Settings Investigates theories and issues associated with developing educational programs and practices in various educational contexts. Addresses the development of new programs and their implementation in schools and other educational settings.

EDUC 817-5 Policy Processes
This course examines three interrelated aspects of policy studies as a critical function of the educational leadership role: conceptual and theoretical foundations concerning policy, policy actors, and policy processes; current research in the field; and topical issues and problems. It also considers social, economic and political contexts (e.g. technologization, corporatization, pluralism) and how they affect education.

EDUC 818-5 Leadership Studies
This course examines three interrelated aspects of educational leadership studies of conceptual and theoretical foundations, with a particular emphasis on ethics of leadership; current research in the field, including feminist and cultural critiques; and topical issues and problems of leadership practice. Considerations of leadership character and role, power and authority in organizational relationships, and organizational goal achievement are central to the course.

EDUC 819-5 Studies in Teacher-Student Interaction
Consideration of systems for analysing teacher interaction and their use in analysing the student’s own classroom teaching. The course will also deal with models of instruction designed to achieve various categories of educational objectives.

EDUC 820-5 Current Issues in Curriculum and Pedagogy
Focuses on educational issues, trends and practices which impact teaching and learning in schools and other educational settings.

EDUC 821-5 Philosophical Issues in Classroom Practices
Philosophical examination of assumptions underlying practical problems in classroom teaching. Some of the main issues examined include: distinguishing teaching, indoctrination, and conditioning; the use of compulsion, manipulation, and discipline; student/teacher relationships; child-centered education; alternative education; punishment and behavior modification. It also focuses on assumptions underlying such practices as play, learning by discovery, individualized instruction, and open education.

EDUC 822-5 Evaluation of Educational Programs
Processes used in program evaluation; including test and other measurement devices; and political, social and philosophical issues relating to the evaluation of educational programs.

EDUC 823-5 Curriculum and Instruction in an Individual Teaching Specialty
An intensive examination of developments in a curriculum area selected by the student. In addition the course will deal with major philosophical and historical factors that influence the present state and future directions of curriculum and instruction.

EDUC 824-5 Seminar in Second Language Teaching
Theories of sentence, discourse, and context in second language education; teaching scientific genres and humanities genres, use of dictionaries and glossaries, use of standardized and alternative forms of assessment.

EDUC 825-5 Second Language Acquisition and Schooling
Academic factors that impact language learning, the universal grammar model of language, speech perception and production in first and second languages.

EDUC 826-5 The Reading Process
This course has a decidedly theoretical emphasis. Topics for study include: reading as a physiological process; psychological models of word processing; models for language and reading comprehension. The literature for this course will draw heavily upon current educational, psycholinguistic and psychological writings. Prerequisite: EDUC 473.

EDUC 827-5 Individual Differences in Learning
Students will examine current conceptions of individual differences that characterize the heterogeneity of students' abilities in school. Educational implications will also be addressed.

EDUC 828-5 Instructional Practices in Reading
The history of reading materials and methods will be discussed, and past and present instructional practices in reading evaluated in terms of state-of-the-art knowledge of instructional research; methods of analysing reading materials will be critiqued. Prerequisite: EDUC 826 or consent of the instructor.

EDUC 829-5 Contemporary Issues in Learning Disabilities
Selective issues important and current in the learning disabilities field are examined in depth. The objective is to enable students to master a significant body of knowledge in the learning disabilities field, and to identify areas of interest for their eventual thesis research. Prerequisite: EDUC 422.

EDUC 830-5 Implementation of Educational Programs
Problems and practices associated with innovation and implementation including the nature of change in the educational context, the roles of teachers, administrators, change agents, and evaluators.

EDUC 832-5 Teaching Composition: Research and Practice
This course leads students to understand, examine, and evaluate research and practice in the teaching of English composition, stressing a writing process and a literary/poetic perspective.

EDUC 835-5 Graduate Seminar in Research
Experience in incorporating computers in educational programs. Prerequisite: EDUC 426.

EDUC 836-5 Foundations of Mathematics Education
This course has a decidedly theoretical emphasis. Philosophical examination of assumptions underlying practical problems in classroom teaching. Some of the main issues examined include: distinguishing teaching, indoctrination, and conditioning; the use of compulsion, manipulation, and discipline; student/teacher relationships; child-centered education; alternative education; punishment and behavior modification. It also focuses on assumptions underlying such practices as play, learning by discovery, individualized instruction, and open education.

EDUC 837-5 Seminar in Education, Social Philosophy, and Sociological Theory
An in-depth study of selected topics in education and social philosophy and sociological theory.

EDUC 838-5 Judgment in Administrative Decision-making
Students examine the exercise of judgment (discretion) as a key element in administrative decision-making, and investigate the various dimensions of the exercise of discretion: conceptual, empirical, normative and prescriptive using perspectives drawn from diverse administrative contexts.

EDUC 839-5 History of Childhood and Education in the Western World
This course will consider the origins of 20th century concepts of childhood and their relationship to child-rearing and education in Europe and North America.

EDUC 840-0 Graduate Seminar
Graded on a satisfactory/unsatisfactory basis.

EDUC 841-3 Graduate Seminar
Sociocultural Perspectives on the Psychology of Development and Education
Sociocultural definitions of psychological development and learning are examined, and alternatives advanced by an array of sociocultural theories and research pertaining to individual and collective development are explored with particular attention to their relevance for educational contexts, practices, and aims.

EDUC 843-5 Embodiment and Curriculum Inquiry
The scholarship on embodiment and its implications for the body as a site for knowledge and its relationship to contemporary curriculum inquiry will be studied with specific emphasis on the area of performative and narrative inquiry and arts education. Central to this course will be the investigation of embodiment from both a philosophical perspective and a literary/poetic perspective.

EDUC 844-5 Research Basis of Mathematics Education
An examination of critical issues, current research and research practices in mathematics education.

EDUC 845-5 Learning Mathematics with Computers
Experience in incorporating computers in mathematical problem solving, adaptation of materials for use in mathematics classroom.

EDUC 846-5 Foundations of Mathematics Education
An examination of historical, cultural, and psychological forces shaping the secondary school mathematics curriculum. Current developments in mathematics curriculum and in mathematics education research.

EDUC 847-5 Teaching and Learning Mathematics
The theory and practice of mathematics teaching at the secondary level. Emphasis on the nature of the learner and the function of the teacher.

EDUC 848-5 Ideas and Issues in Aesthetic Education
This course relates critical ideas in aesthetics to questions concerning the nature, purpose, and provision of the arts (visual art, music, drama, dance, literature) in education.

EDUC 849-5 Artists, Society and Arts Education
A major survey of the educational theories and practices of musicians and artists generally from medieval times to the present. The special focus will be on modern responses of musicians and artists to modern demands for mass arts education. Material will be drawn from Europe, North America, Asia, and other parts of the world where mass arts education provision occurs.
EDUC 850-5 Creativity and Education
This course involves an exploration of the concept of creativity used in educational theory and practice. Through an examination of philosophical writings, psychological studies, first-hand accounts of creators, biographical and historical material, and works of art and science themselves, an attempt will be made to come to grips with some of the problems which surround this concept and thereby to evaluate views about creativity put forth in theoretical accounts and exhibited in educational practice.

EDUC 851-5 Perspectives on Technology-supported Learning
Examines applications of technology in teaching and learning emphasizing the progression of technology and research in this area since the early 20th century, through the present to predictions about the future. Related fields of inquiry to be examined include: educational technology, artificial intelligence, computer assisted instruction (CAI), computer-supported collaborative learning (CSCL), distance education, and socio-political perspectives on technology.

EDUC 852-5 Education and Dramatic Art
This course involves an exploration of basic issues and questions which underlie the nature and provision of drama education in the schools. It includes a critical examination of the claims made in the theoretical literature regarding the nature and aims of drama education and an exploration of the implications for drama education curriculum and pedagogy.

EDUC 853-5 Tools, Theories and Practices of Computer Supported Collaborative Learning
Computer-supported collaborative learning environments are designed with three principal objectives: to upgrade the conceptual quality of what is learned; to increase students’ abilities to monitor, control, and regulate their own learning; and to provide improved support for social aspects of learning. In this course students will critically examine the theoretical underpinnings of the design of such learning environments, and examine and contribute to the development of practices in K-12 classrooms and other educational settings that make use of them.

EDUC 854-5 Teachers as Agents of Change
The narratives of teachers of minority and Anglo-European ancestry will provide insights into how teachers of different cultural backgrounds and beyond normative institutionally prescribed roles to define and implement positive social and educational changes for their students.

EDUC 855-5 Multicultural and Race Relations Education: Policy Development and Program Implementation
Theory, research, policy development and program implementation in multicultural and race relations education encompass a wide spectrum of areas of educational inquiry.

EDUC 856-5 Sociocultural Perspectives on Education and Identity
Course activities will be structured for participants to consider recent formulations of learners as agents as well as subjects of culturally constructed, socially imposed worlds. Participants will examine a number of ethnographic descriptions of the experiences of learners in a variety of communities, noting in particular their use of diverse mediations/tools, including language. Participants will consider these ideas in relation to their own educational communities and develop plans for research activity in those sites.

EDUC 857-5 Issues and Topics in Environmental Education
Examines the origins of environmental education, the range of program offerings, and the educational concepts which appear to underlie them. Prerequisite: consent of the instructor.

EDUC 858-5 Contemporary Research and Classroom Practices in French Immersion
Students examine studies, reports and articles relating to French Immersion methodology, curriculum and program evaluation. Students derive classroom applications and curriculum changes from these studies. Prerequisite: EDUC 481.

EDUC 859-5 Philosophy of Science and Perspectives on Education
An introductory examination of various philosophical positions about the nature of science, including logical positivism, naive realism, instrumentalism, relativism and social constructionism, and their relation to curriculum and instruction in science.

EDUC 860-3 Foundations of Educational Psychology
An advanced survey of core topics in educational psychology. Prerequisite: An undergraduate course in educational psychology or a cognate field of psychology.

EDUC 861-5 Study of Learning Environments
This course reviews research on learning environments (also known as classroom climates or classroom ecologies) in terms of psychological and social perspectives on educational experience. Implications for student learning, professional development and evaluating education innovations are examined.

EDUC 862-4 Individual Assessment Procedures
An overview of assessment procedures used in educational and community counselling settings, including interviewing, standardized tests, and observational procedures. Review of assessment related issues such as diagnosis, ethics, bias, psychometrics, and the integration of assessment procedures into the overall counselling process. Students who have taken EDUC 872 in previous semesters may not take this course for credit.

EDUC 863-5 Quantitative Methods in Educational Research
Focus on critical analysis of quantitative research in education. Research studies examined will be based on exploratory and confirmatory data analysis, including group comparisons and correlations. Students will use calculators and computers for data analysis and display. Prerequisite: EDUC 864.

EDUC 864-5 Research Designs in Education
Designing and interpreting research about education. Introduction to survey techniques, correlational designs, classic experimental and evaluation designs for investigating causal relations, case study methods, interpretive approaches to research. Students with credit for EDUC 814 may not take this course for further credit.

EDUC 865-5 Advanced Qualitative Research in Education
Students will study in depth various qualitative methodological approaches to educational research, will develop competence to contribute significantly to knowledge in their particular field of study, and will engage in intensive practice of various methodological approaches to qualitative research introduced in EDUC 867. Prerequisite: EDUC 864 and 867.

EDUC 866-5 Advanced Qualitative Research in Education
Students will study in depth various qualitative methodological approaches to educational research, will develop competence to contribute significantly to knowledge in their particular field of study, and will engage in intensive practice of various methodological approaches to qualitative research introduced in EDUC 867. Prerequisite: EDUC 864 and 867.

EDUC 867-5 Qualitative Methods in Educational Research
This course introduces students to qualitative research in education and the range of research questions, topics and research methods. Prerequisite: EDUC 864 (prerequisite not required for students in M.Ed. in Educational Practice stream).

EDUC 868-5 Curriculum Theory and Art Education
The course examines and relates conceptions of creativity and response in the visual arts to the fundamental questions of curriculum theory.

EDUC 869-5 Music Education as Thinking in Sound
This course presents the theory and practice of music education based on theories of auditory perception, musical theory, and various cross-cultural perspectives on musical behavior.

EDUC 870-4 Theories of Counselling
Students examine analytic, phenomenological, existential, behavioral and cognitive approaches to counselling, and the philosophical and personality theories upon which they are based.

EDUC 871-4 Family Counselling
Students discuss models of family dynamics and instructional interventions applicable by school personnel in family counselling interactions. Concepts and techniques will be explicated through discussion and simulation. Prerequisite: EDUC 870.

EDUC 872-3 Ethics in Counselling Psychology
Issues related to foundational ethical principles and systems, professional and legal standards for counselling psychology, review of ethics codes, ethical decision-making, and other topics including professional boundaries, competence, service across cultures, social justice, consulting and private practice, and ethical guidelines around evaluation, assessment, supervision, and research.

EDUC 873-4 Vocational Counselling
Provides a sound theoretical basis for career counselling activities. Major vocational theorists will be discussed along with relevant assessment considerations. Skill will be developed in such areas as utilizing community resources, obtaining vocational information, building a career information centre, job search techniques, and procedures for enhancing occupational placement.

EDUC 874-5 Counselling Skills and Strategies
Counselling skills and strategies are analysed, practiced, and critically examined. Counsellor decision-making, counselling effectiveness, and professionalism in counselling are also considered. Prerequisite: consent of the instructor.

EDUC 875-5 Cognitive Intervention Research
Examines issues in research designed to enhance learners' cognitive processes. This research is subsumed under the broad term 'cognitive interventions,' which in turn, refers to research purported to increase learners' success in learning. The issues examined include the historical context, problems and prospects of cognitive interventions.

EDUC 876-4 Career Counselling
An examination of contemporary approaches to school counselling. Program development, consultation skills, counselling interventions in school counselling are considered.

EDUC 878-5 Group Counselling
An examination of contemporary approaches to group counselling. Prerequisite: EDUC 874.

EDUC 879-5 Lev Vygotsky’s Theories in Education
Covers all major aspects of Lev Vygotsky’s cultural-historical activity theory of human development and its contemporary applications in education. Concepts include the zone of proximal development of higher psychological functions, language and consciousness, interpersonal relations, analysis according to units, and “tool-and-result” methodology.

EDUC 880-2.5 Master's Project (Completion)
EDUC 881-5 Project
The project is a study that may take a variety of different forms including a survey, case study, extended essay, curriculum development project inter alia; central to its character is a concern with the application of relevant academic knowledge to professional practice. The project should normally be completed and approved in two semesters.

EDUC 883-5 MEd Comprehensive Examination
The examination is graded on a satisfactory/unsatisfactory basis.

EDUC 884-2.5 MEd Comprehensive Examination (Revision)
Students who do not complete EDUC 883-5 in one semester must register for this course in all subsequent semesters.

EDUC 890-4 Educational Media as Foundations of Curriculum
Provides a historically-grounded treatment of the constructive role of technologies in the transmission and production of cultural knowledge and understanding. Students develop a grasp of the ways in which technologies have mediated and transformed the nature of knowledge, the knower, and processes of coming to know.

EDUC 891-4 Learning Design in Technology-Mediated Environments
Engages students in a critical analysis of learning design theory, including the underlying assumptions these embrace about knowledge, learning, the learner, learning technologies and the nature of instruction. Students will examine the appropriateness of media and learning technologies to support teaching and learning, and create a learning design according to a principled approach.

EDUC 892-4 Cognitive Tools and Multimedia Learning
Design principles for multimedia learning are derived from the theories and research of cognitive science. Topics include: tutorial interactions, history of adaptive learning systems, adapting to individual differences, dialogues with teachers (and other agents), problem solving and cognitive load, learning from multimedia, cognitive principles for document design, tools for self-regulated learning, intrinsic and situational motivation, simulations and self-regulated inquiry, inquiry with microworlds and cognitive tools, multimedia scenarios for anchored instruction.

EDUC 893-4 Organizational and Social Aspects of Learning Technology Design
Reviews constructive approaches to integrating learning technologies, provides analysis tools from cultural historical activity theory, reviews impact of organizational culture and draws on visualization of social activity networks. Organization and change strategies are examined in higher, school and community function. Each student will apply insights from multimedia, cognitive principles for document design, for organizational learning technologies.

EDUC 894-4 Methods for Research and Inquiry in Learning Technologies
Examines methods, practices and thinking of direct value in improving quality and use of learning technologies. Students experience leading software tools for observational analysis, qualitative research and digital ethnography. We consider computer-supported methods for learning technology professionals and for assessing learning technology programs.

EDUC 897-5 Master’s Thesis (Completion)
EDUC 898-10 Master’s Thesis
The thesis is a research investigation designed to generate and/or examine critically new knowledge in the theory and/or practice of education. The thesis should normally be completed and approved in three semesters.

EDUC 899-10 Doctoral Thesis
Prerequisite: EDUC 983.

EDUC 901-5 Seminar in the History of Educational Theory
The historical roots of educational thought are examined from a broad cultural perspective. Major works in disciplines such as philosophy, psychology and sociology which have had significant impact on educational theorizing will be studied. Special attention will be paid to the relationship between theory and educational practice.

EDUC 902-5 Interdisciplinary Seminar in Contemporary Educational Theory
Contemporary educational theories and theories from supporting disciplines (e.g., psychology, sociology, philosophy) will be examined and analysed. The relationships among contemporary theories, current practice and educational change will be focal.

EDUC 903-5 Research Apprentices
The apprenticeship is designed to provide the student with practical experience in scholarly inquiry in close co-operation with a faculty member in the student’s area of specialization.

EDUC 904-5 Fieldwork III
EDUC 905-5 Fieldwork IV
EDUC 907-5 Selected Topics
EDUC 908-5 Selected Topics
EDUC 910-5 Directed Readings
EDUC 911-5 Colloquium in Curriculum Theory (I)
EDUC 912-5 Colloquium in Curriculum Theory (II)
EDUC 921-5 Seminar in Philosophy and Educational Theory
Philosophical examination of issues related to the school as an educational institution with social and political connections. Issues examined include: the education/training distinction; the justification of education; compulsory curriculum; freedom and authority in education; equality of educational opportunity; legal-moral questions central to educational administration; teachers’/parents’/students’ rights and duties; accountability; and the logic of decision-making.

EDUC 922-5 Advanced Seminar in Epistemology and Education
An in-depth study of epistemological issues in education, including: concepts of perception, cognition, imagination, memory, understanding, learning and the assessment of learning. Other questions dealt with are: What are the various forms of knowledge? What are the implications for core curriculum? What epistemological assumptions underlie current educational practices? Is the relative importance of knowledge thesis defensible? Are the claims of sociology of knowledge sound? What is meant by: objectivity/knowledge/belief/truth? In what sense can ‘rationality’ be defended as a central educational objective?

EDUC 930-4 Considering the Future of Learning Communities
Considers what it means to build and have membership in a learning community, and how the use of computing and telecommunications technologies may contribute to these goals. Students will critically examine reports from a variety of traditions (including anthropology, sociology, cognitive science) about how traditional and "wired" learning communities function. Each student will apply insights from the class readings and activities to produce a design proposal for a future learning community.

EDUC 931-4 Group and Organizational Learning Technologies
An advanced class engaging candidates in research toward social and organizational factors and designs. Projects are determined through student study plans and faculty research.

EDUC 932-4 Learner-Centred Design
Examines a new paradigm for designing learning environments that integrates research on the experience of learning complex material with the rigor of systematic design processes. Students will design and carry out a learner-centred study and will be expected to contribute to the development of this new design paradigm in class discussions and in reflective writing.

EDUC 941-5 Mathematical Learning and Thinking: Historical, Philosophical, and Psychological Dimensions
Focuses on motivations and rationales guiding seminal thinkers in the historical development of mathematical thinking, mathematical cognition and learning, with an eye toward foundational issues in contemporary educational research, theory and practice.

EDUC 942-5 Contemporary Theories and Methodologies in Mathematics Education
Contemporary theories and methodologies in mathematics education will be examined and analysed. Developing an overview of mathematics education as an evolving research domain will be focal.

EDUC 945-5 Doctoral Seminar in Arts Education
The course provides a broad theoretical overview of problems and ideas associated with the nature and provision of arts education in the schools.

EDUC 946-5 Doctoral Seminar in Mathematics Education
This seminar is designed to extend and deepen students’ understanding of the discipline of mathematics education. It will examine international developments, research programs, special interest groups, recent theories in learning and teaching mathematics, and issues in mathematics teacher education. Prerequisite: EDUC 942.

EDUC 950-5 Approaches to Educational Research
The broad paradigms encompassing much current educational research are examined, with emphasis on their philosophical and assumptional bases, as well as general ethical and methodological issues. Particular attention is paid to the critical reading of research and the implications for educational leadership. In addition, students begin to identify a research topic and to develop a defensible research orientation.

EDUC 960-5 Ethics, Law and Professional Leadership
This seminar examines the ethical and legal environment of professional leadership. Specifically, the course addresses moral issues and dilemmas embedded in professional practice including occupational and ordinary morality, issues of deception and honesty, informed consent, privacy and confidentiality, conflict of interest, individual and collective responsibility, inter alia. The course will use cases and personal experience as heuristics for learning.

EDUC 961-5 Educational Governance, Reform and Diversity
The nature and impact of recent wide-ranging systemic educational reform in several different countries are critically examined, through two major themes. One theme is the politics and dynamics of governance, with a particular emphasis on participatory forms of political life in a heterogeneous society. The other theme is the politics and culture of difference, and the development of community which respects these differences.
EDUC 962-5 Leadership, Accountability and the Public Interest
The special responsibilities of leaders in educational institutions for accountability both to learners and to the wider community with respect to policies, practices and programs are the focus of this seminar. Contemporary approaches to program assessment and to ensuring cost-effectiveness in educational management are applied to cases emerging from student experience.

EDUC 963-5 Approaches to Problematizing
This course examines how problems in practice are identified, defined and understood from a variety of different theoretical perspectives. Within the common framework of the course, students will investigate a problem or issue of significance to their individual workplaces or to their individual research endeavors.

EDUC 964-5 Seminar in Educational Theory
EDUC 970-4 Systems and Paradigms in Educational Psychology
A survey of major 20th century systems and paradigms that underlie research and theories in instructional psychology, addresses learning, cognition, motivation, methods of inquiry, and other cornerstones of the field. Prerequisite: one of EDUC 826, 829, 860, 870 or equivalent graduate course.

EDUC 971-4 Advanced Topics in Educational Psychology
In-depth critical analysis of select topics in educational psychology. Requisite: EDUC 860. Students who have taken EDUC 865 in previous semesters may not take this course for further credit.

EDUC 972-4 Colloquium in Psychology of Education
Survey of methods for synthesizing knowledge gleaned from primary and secondary research, including meta-analysis and integrative reviewing. Assignments culminate in presenting a colloquium about a topic of the student's choice to the faculty.

EDUC 975-4 Advanced Quantitative Methods in Educational Research
Methods for analyzing multivariate data in educational research, meta-analytic methods, and applications and frailties of advanced quantitative analysis. Illustrations from educational research are used throughout. Prerequisite: EDUC 863 and 864 or permission of instructor.

EDUC 983-5 Doctoral Comprehensive Examination
The examination is graded on a satisfactory/unsatisfactory basis.

Education Professional EDPR
Faculty of Education
EDPR 393-3 Special Topics
This field based course will explore issues of concern to experienced practising educators. Course may be offered on a pass/withdrawal basis. Prerequisite: EDUC 405 or special permission of the instructor. Variable credit hours 2, 3, 4, 5, 6.

EDPR 410-413 Field Based Studies in Curriculum Development
This course is intended for practising teachers, school administrators or other practising educators who are involved in curriculum development. The course provides opportunities for members of the teaching profession to work on curriculum development projects under the supervision of faculty members and/or distinguished practitioners designated by the faculty. Those wishing to undertake a field based studies course must submit a proposal form, available from the Office of Field Programs, before the end of the semester prior to the one in which the student intends to commence the study. The proposal must be approved by the director of field programs prior to commencement. Field based studies in curriculum development may not form a component of EDUC 404. Variable credit hours 2, 3, 4, 5, 6. Prerequisite: EDUC 405 or special permission of the instructor.

EDPR 414-417 Field Based Studies in Educational Practice
This course is intended for practising teachers who wish to upgrade their professional work in a specific area of instruction or educational service. The field work is completed by individuals or groups of teachers under the supervision of a faculty member or field studies supervisor designated by the faculty. Those wishing to undertake a field based studies course must submit a proposal form, available from the Office of Field Programs, before the end of the semester prior to the one in which the student intends to commence the study. The proposal must be approved by the director of field programs prior to registration in the course. Field based studies courses may have a credit value of 2, 3, 4 or 5 semester hours, depending upon the nature of the project proposal. Evaluation is based on a pass/withdraw system. Field based studies in educational practice may not form a component of EDUC 404. The course may form a component of an approved program of studies for the post baccalaureate diploma. Prerequisite: teaching certificate or permission of the director of field programs.

EDPR 418-421 Group Field Studies in Selected Professional Topics
This course is intended for small groups of practising educators who wish to investigate a specific topic in education through focused inquiry. Seminars, readings and related field work are directed by a faculty member or field studies supervisor designated by the Faculty of Education. The designated supervisor, on behalf of the group, must submit a proposal form, available from the Office of Field Programs, before the end of the semester prior to the one in which the students intend to commence the study. The proposal must be approved by the director of field programs prior to registration in the course. Field studies courses may have a credit value of 2, 3, 4 or 5 semester hours, depending upon the nature of the project proposal. Evaluation is based on a pass/withdraw system. Groups field studies in selected professional topics may not form a component of EDUC 404. The course may form a component of an approved program of studies for the post baccalaureate diploma. Prerequisite: teaching certificate or permission of the director of field programs.

EDPR 492-499 Special Topics
This field based course will explore issues of concern to experienced practising educators. Course may be offered on a pass/withdrawal basis. Variable credit hours 2, 3, 4, 5, 6. Prerequisite: EDUC 405 or special permission of the instructor.

EDPR 501-520 Special Topics
This course requires students to investigate current theory, research and pedagogy related to a particular theme. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 521-540 Special Topics
This course involves students in critical examination of policy, curricular, instructional and assessment practices related to a particular theme. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.
Engineering Science ENSC
Faculty of Applied Sciences

ENSC 194-3 Optional Job Practicum
This course is designed to provide an introduction to the practice of engineering, surveying its history and its current state. The social and political aspects of engineering decisions will be illustrated by a number of case studies. Corequisite: ENSC 101. Breadth-Science.

ENSC 100W-3 Engineering Technology and Society
This course is designed to provide an introduction to the practice of engineering, surveying its history and its current state. The social and political aspects of engineering decisions will be illustrated by a number of case studies. Corequisite: ENSC 101. Writing/Breadth-Science.

ENSC 101-1 Writing Process, Persuasion and Presentations
This course provides a general introduction to the principles of effective communication with special emphasis on the writing process, persuasive writing, research papers, and oral presentations. In conjunction with ENSC 100-3, the course also explores current social and ethical issues in engineering. Corequisite: ENSC 100.

ENSC 101W-1 Writing Process, Persuasion and Presentations
This course provides a general introduction to the principles of effective communication with special emphasis on the writing process, persuasive writing, research papers, and oral presentations. In conjunction with ENSC 100-3, the course also explores current social and ethical issues in engineering. Corequisite: ENSC 100. Writing.

ENSC 102-1 Form and Style in Professional Genres
The major focus of this course is on the style and format of technical writing with attention to laboratory reports and project documentation. This course also examines resumes, cover letters, interview skills and formal reports to help students prepare for their first internship semester. It also addresses listening skills and group dynamics in the context of the team projects undertaken for ENSC 151. Corequisite: PHYS 131.

ENSC 150-3 Introduction to Computer Design
Digital design concepts are presented in such a way that students will learn how basic logic blocks of a simple computer are designed. Topics covered include: system of binary numbers, Boolean Algebra, combinational logic design, sequential logic design, and basic Von Neumann computer architecture. Students with credit for CMPT 150 or 250 cannot take this course for further credit. CMPT 150 can be substituted for this course. Quantitative.

ENSC 182-3 Mechatronics Design I
First year project course designed to provide students with a first exposure to the challenges of project organization. Students are responsible for designing and constructing a mechanical robot optimized to solve a particular chosen task. The engineering challenges of the project are expected to focus half on mechanical design and half on control algorithm design and implementation.

ENSC 194-3 Optional Job Practicum
Four month internship of a non-technical nature. May be taken at any point during the program but will not count toward one of the three mandatory co-op work terms. Credit is awarded as in ENSC 195. Credits from this course do not count towards the credits required for an SFU degree.

ENSC 195-3 Industrial Internship I
First four month internship in industry. Credit is given as pass/withdraw/fail (P/W/F) only, based on the employer's and co-operative education co-ordinator's evaluation of the student's work. Credits from this course do not count towards the credits required for an SFU degree.

ENSC 196-3 Special Internship I
Four month internship in industry or university research environment. Credit is awarded as in ENSC 195. Prior approval of Internship Co-ordinator required. Credits from this course do not count towards the credits required for an SFU degree.

ENSC 201-3 The Business of Engineering
This course covers the business, management and entrepreneurial concepts that are important to engineers who manage projects, run businesses, or need to decide on the most efficient method for accomplishing a task. The topics to be covered include: financial accounting, rates of return, taxes, cost-benefit analyses, marketing, financing methods, and business plans. Prerequisite: 45 credit hours.

ENSC 204-1 Graphical Communication for Engineering
An introduction to the use of graphical communication in engineering. Objectives are to improve the students' literacy in the use of graphics to communicate engineering information, and their ability to visualize and to think in three dimensions. Specific application areas discussed include 2D and 3D geometry in mechanical drawing, electronics-related drawings, block diagrams, and flow charts. The use of CAD tools will be discussed, and demonstrations of some tools will be provided.

ENSC 215-3 Microcontroller Interfacing and Assembly-Language Programming
A common microcontroller will be presented such that students will be able to create a small project by interfacing with a variety of devices using assembly language. Topics include: the central processing unit (CPU) and memory, how the CPU executes machine code in the memory, how the programming task is simplified by the use of an assembler, the operation of the stack, writing subroutines, interfacing with input/output devices, and handling interrupts. Coding, testing, debugging, and other laboratory techniques will be introduced as needed. Prerequisite: ENSC 150 and CMPT 128. CMPT 128 can be taken concurrently. Students who have taken ENSC 151 cannot take this course for further credit.

ENSC 220-3 Electronic Circuits I
This course will cover the following topics: fundamental electrical circuit quantities, and circuit elements; circuits laws such as Ohm law, Kirchoff's voltage and current laws, along with series and parallel circuits; operational amplifiers; network theorems; nodal and mesh methods; analysis of natural and step response of first (RC and RL), as well as second order (RCL) circuits; real, reactive and rms power concepts. In addition, the course will discuss the worker safety implications of both electricity and common laboratory practices such as soldering. Prerequisite: PHYS 121 and 131, MATH 232 and 310. MATH 232 and/or 310 may be taken concurrently. Students with credit for ENSC 125 cannot take this course for further credit.

ENSC 222-4 Microelectronics I
This course teaches analog/digital electronics and basic device physics in the context of modern silicon integrated circuits technology. Topics include: qualitative device physics, electrical characteristics; implementations and models of basic semiconductor devices (diodes, BJTs and MOSFETs; circuit simulation via SPICE; basic diode circuits; transistors as amplifiers and switching elements; temperature effects and compensation; single-stage transistor amplifiers; biasing, current sources and mirrors. Prerequisite: ENSC 150 or CMPT 150, and ENSC 220. Students with credit for ENSC 222 cannot take this course for further credit. Quantitative.

ENSC 223-4 Electronic Circuits
Introduces the basic electronic components, amplifiers, diodes, and oscillators. Fundamentals of logic design. Prerequisite: ENSC 220. Students who have taken this course may not take ENSC 223 for further credit.

ENSC 224-3 Electronic Devices
This course presents the elements and principles involved in design and analysis of basic mechanical structures and mechanisms. Mechanical elements such as gears, cams and bearings and fundamental relationships between the forces and corresponding motion or deflection are investigated through examples and experiments. This background can then be used in the design, analysis and development of computer controlled machines such as robotic devices. Prerequisite: PHYS 120, MATH 310.

ENSC 231-3 Engineering Materials
Materials, their structures, properties and performance; crystal structures and instruments for structure determination; polymers, ceramics, and composites; quality control and reliability. Prerequisite: CHEM 120 or 121; PHYS 140 or 121. Students who have taken ENSC 320 may not take this course for further credit.

ENSC 250-3 Introduction to Computer Architecture
This course deals with the main concepts embodied in computer hardware architecture. In particular, the organization, design and limitations of the major building blocks in modern computers is covered in detail. Topics will include: processor organization; control logic design; memory systems; and architectural support for operating systems and programming languages. A hardware description language will be used as a tool to express and work with design concepts. Prerequisite: CMPT 150 or ENSC 150. This course is identical to CMPT 250 and students cannot take both courses for credit. Students who have taken CMPT 390 may not take CMPT 250 for further credit. Quantitative.

ENSC 253-3 Special Topics in Engineering Science
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 264-3 Special Topics in Engineering
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 281-3 Statics and Strength of Materials
ENSC 282-3 Kinematics and Dynamics of Rigid Bodies and Mechanisms
Planar and 3D motions kinematics and kinetics of rigid bodies and mechanisms; linkages, gears, cams; synthesis and analysis of mechanisms; consideration of the static and dynamic forces in machines; vibration analysis, response to shock, motion and force transmissibility, vibration isolation. Prerequisite: PHYS 140, MATH 152, and 310.

ENSC 283-3 Introduction to Fluid Mechanics
Physical properties of fluids and fundamental concepts in fluid mechanics. Hydrostatics. Conservation laws for mass, momentum and energy. Flow similarity and dimensional analysis as applied to engineering problems in fluid mechanics. Laminar and turbulent flow. Engineering applications such as flow measurement, flow in pipes and fluid forces on moving bodies. Prerequisite: PHYS 141, MATH 152, and 310.

ENSC 295-3 Industrial Internship II
Second four month internship in industry. Credit is awarded as in ENSC 195. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: ENSC 195 or 196.

ENSC 296-3 Special Internship II
Four month internship in industry or university research environment. Credit is awarded as in ENSC 195. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: ENSC 195 or 196 and approval of internship co-ordinator required.

ENSC 304-1 Human Factors and Usability Engineering
The user is often overlooked in the engineer’s quest for a functional and efficient design. This course examines the factors that make designs more or less usable and how to integrate usability constraints and testing procedures into the design process.

ENSC 305-1 Project Documentation and Team Dynamics
This course is integrated with an ENSC project course (either ENSC 340 or 440) that provides practical experience with the design process for development projects. Topics include project management, team writing, project documentation (proposals, functional and design specifications, progress reports, and users manuals), group dynamics and dispute resolution. Corequisite: ENSC 340 or 440.

ENSC 305W-1 Project Documentation and Group Dynamics
This course is integrated with an ENSC project course (either ENSC 340 or 440) that provides practical experience with the design process for development projects. Topics include project management, team writing, project documentation (proposals, functional and design specifications, progress reports, and users manuals), group dynamics and dispute resolution. Corequisite: ENSC 340 or 440. Writing.

ENSC 311-3 The Business of Engineering I
Provides fundamentals of the business, management and entrepreneurial concepts important to Canadian engineers who manage projects, run businesses, or need to decide on the most efficient method for accomplishing a task. Topics include the Canadian business environment, theories of management thought, forms of ownership, corporate structure and growth, the process of management - planning, organization theory, motivation, control and communication. Additional topics include financial accounting, rates of return, taxes, cost-benefit analysis, capital financing methods, and business plan. Prerequisite: students must have completed a minimum of 75 credit hours. Students who have taken this course may not take ENSC 201 for further credit.

ENSC 312-3 The Business of Engineering II
Offered in conjunction with ENSC 384 Mechatronics Design II. Concepts covered include project management skills such as budgeting, scheduling and financial analysis as well as facilitating any communication and negotiation. Students will experience what it is like to be part of a diverse project team while working on a specific project. The business topics covered in ENSC 311 are reinforced in this course. These topics include financial accounting, rates of return, taxes, cost-benefit analysis, marketing, financing methods, and business plan. Prerequisite: ENSC 311. Corequisite: ENSC 384.

ENSC 320-3 Electric Circuits II
This course is a second course on electric circuits and the topics covered include: the use of Laplace transform in circuit analysis, including poles and zeros, the frequency response and impulse response; convolution as a method for computing circuit response; admittance, capacitance, inductance and impedance networks; magnetically coupled circuits; three-phase circuits; two port circuits; and filtering. Prerequisite: ENSC 220. Students with credit for ENSC 125-5 cannot take this course for further credit.

ENSC 325-4 Microelectronics II
This course introduces students to analog integrated circuit design in the context of modern silicon integrated circuits technology. Topics included: integrated circuit technology and design tools; integrated component characteristics and limitations, differential amplifiers; multi stage amplifiers; feedback amplifiers; stability and frequency compensation; integrated operational amplifiers; bipolar and MOS digital circuits; analog aspects of digital electronics. Prerequisite: ENSC 222 or 225.

ENSC 327-4 Communication Systems
This course represents and introduction to analog and digital communications systems. The main topics are: a review of Fourier Transform; the representation of bandpass signals; random signals in communications, including stationarity, ergodicity, correlation, power spectra and noise; amplitude and frequency modulation; circuits and techniques for modulation and demodulation; frequency division multiplexing; baseband digital communication; time division and multiplexing; an introduction to basic digital modulation techniques such as BPSK, FSK and QPSK. Laboratory work is included in this course. Prerequisite: ENSC 281 or 380 or 382, and STAT 270.

ENSC 328-1 Random Processes in Engineering
An introduction to continuous-valued random processes, including the analysis of these processes in the time and frequency domain. Topics: definitions of random processes taking complex values in continuous time; autocorrelation and autocovariance functions in the time domain; stationarity, ergodicity; power spectral density in frequency domain; effect of linear filters; cross correlation functions and cross-power spectral densities. Prerequisite: ENSC 380 and STAT 270. Students who have taken ENSC 327 may not take ENSC 328 for further credit.

ENSC 329-4 Introduction to Digital Logic
Conveys the essential principles of digital logic systems which are the building blocks of many electronic systems including computer systems. These principles form the basis of the electronics component of the mechatronics curriculum and therefore a good understanding of the material is crucial. Prerequisite: ENSC 226, CMPT 128.

ENSC 330-4 Engineering Materials
An introductory course in materials science which covers materials’ their structures, properties, and performance; crystal structures and instruments for structure determination; polymers, ceramics, composites; quality control and reliability. Prerequisite: CHEM 121, PHYS 121.

ENSC 331-3 Introduction to Microelectromechanical Systems
An introduction to microelectromechanical systems, covering thin film processing technologies, bulk and surface micromaching, and MEMS applications. Prerequisite: ENSC 282, 283, 227.

ENSC 332-4 Microprocessors and Interfacing
Covers basic microcomputer architecture, design and analysis of address decoders and memory systems, design and analysis of Assembly language programs and microcomputer system design. Prerequisite: ENSC 229.

ENSC 350-3 Digital Systems Design
This course deals with advanced topics in digital design such as advanced state machine concepts, asynchronous design, hardware description languages, bus interfacing and DSP architecture. It also covers both the architecture and programming of field programmable logic devices. Some laboratory work is expected. Prerequisite: ENSC 215, and either ENSC 250 or CMPT 250.

ENSC 351-4 Real Time and Embedded Systems
This course concentrates on the problems encountered when attempting to use computers in real time (RT) and embedded applications where the computer system must discern the state of the real world and react to it within stringent time constraints. Both design methodology and practical implementation techniques for RT systems are presented. Although some hardware will be involved, it should be noted that this course concentrates on real time software. Prerequisite: CMPT 128, and either CMPT 250 or ENSC 250, and a minimum of 60 credit hours. ENSC 215 is highly recommended.

ENSC 363-3 Special Topics in Engineering Science
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 364-4 Special Topics in Engineering Science
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 370-3 Biomedical Engineering Directions
An overview of the discipline of biomedical engineering, including its purpose and scope. Typical discussion topics: goals and limitations of biomedical engineering, the nature and relevant technologies of selected application areas, common aspects of biomedical practice, current trends and new directions in biomedical engineering. Students conduct extended investigations of biomedical practice, new biomedical technologies or possible new products, then prepare reports and present seminars. Prerequisite: Completion of at least 25 credit-hours of Engineering Science (ENSC) courses plus KIN 220.

ENSC 372-4 Biomedical Instrumentation
Instrumentation techniques for measuring common physiological signals. Bioelectric and biochemical sensors. Biostimulation. Electronic design issues: electrical safety, signal conditioning and protection against noise, digital signal acquisition. Live subject ethical considerations. Laboratory work to include use of data acquisition packages in conjunction with various sensors, as well as design and construction of a full signal acquisition chain, from sensor to RAM. Prerequisite: ENSC 220, ENSC 380 and KIN 220.

ENSC 374-4 Biomedical Image Acquisition
Provides an understanding of the scientific principles, physics and engineering technology that provide the basis for the various techniques (radiography, sonography, computed tomography, magnetic resonance imaging), by which medical images are
ENSC 387-4 Introduction to Electro-Mechanical Sensors and Actuators
This course provides an introduction to sensors and actuators for electromechanical, computer-controlled machines and discrete control systems. Topics include operational principles, design considerations, and applications of analog sensors, digital transducers, stepper motors, continuous-drive actuators, and drive system electronics. Component integration and design considerations are studied through examples selected from applications of machine tools, mechatronics, precision machines, robotics, aerospace systems, and ground and underwater vehicles. Laboratory exercises strengthen the understanding of engineering performance, system design and integration. Prerequisite: ENSC 281 or 380 or 382.

ENSC 395-3 Industrial Internship III
Third four month internship in industry. Credit is awarded as in ENSC 195. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: ENSC 295 or 296 and a minimum of 75 credit hours study.

ENSC 396-3 Special Internship III
Four month internship in industry or university research environment. Approved entrepreneurial projects will also be considered as internships. Prerequisite: ENSC 295 or 296, a minimum of 75 credit hours of study and approval of internship co-ordinator required.

ENSC 400-402-4 Directed Studies in Engineering Science
Directed reading and research in a topic chosen in consultation with a supervisor. Admission requires agreement by a proposed faculty supervisor and submission of a proposal to the school at least one month prior to the start of the semester in which the course will be taken. Upon completion of a directed study course, the student must submit a copy of the 'deliverables' to the chair of the undergraduate curriculum committee. Prerequisite: permission of the undergraduate curriculum committee chair.

ENSC 406-2 Engineering Ethics, Law, and Professional Practice
This course provides an introduction to the engineering profession, professional practice, engineering law and ethics, including the issues of worker and public safety. It also offers opportunities to explore the social implications and environmental impacts of technologies, including sustainability, and to consider engineers' responsibility to society. Prerequisite: 100 credit hours or permission of the instructor.

ENSC 424-4 Multimedia Communications Engineering
This course covers the technical basis for multimedia communications systems. The main topics are as follows: methods for audio and visual signal compression and processing; the communications requirements of multimedia systems, such as synchronization, quality of service and bandwidth; the architectures and protocols associated with multimedia communications networks. Prerequisite: ENSC 281 or 380 or 382.

ENSC 425-4 Electronic System Design
The principles and processes involved in designing analog circuits, emphasizing the functional blocks that comprise subsystems of a larger analog signal processing system. Topics include linear and nonlinear amplifiers, active filters, signal generators, signal modulators, switchmode power converters and analog/digital data conversion. The effects of non-ideal aspects of IC operational amplifiers on system performance are discussed and verified using laboratory projects. Students should be familiar with the behaviour and application of discrete semiconductor devices. Prerequisite: ENSC 320, 325 and 380.

ENSC 426-4 High Frequency Electronics
Transmission lines and waveguides, microwave devices, travelling wave devices. An introduction to the theory of radiation, antennas and wave propagation, and microwave scattering theory. The design of complete communication systems incorporating microwave, optical and satellite channels. Laboratory work is included in this course. Prerequisite: PHYS 324.

ENSC 427-4 Communication Networks
Quantitative performance analysis and design of data and integrated services networks. Re-transmission error recovery schemes, networks of queues, congestion control, routing strategies. Multiple access techniques in data networks. Wireless networks, routing approaches in mobile networks. Analysis and design of broadband integrated services digital networks, asynchronous time division multiplexing. Laboratory work is included in this course. Prerequisite: ENSC 327 or permission of instructor.

ENSC 428-4 Digital Communications
This course will cover the physical-layer design issues in digital communication systems. The major topics covered are: information measures and the notion of channel capacity; link budgets; digital modulation techniques, including the signal space concept and optimal detectors, error performance in noise, suboptimal detectors, pulse shaping, synchronization, and equalization; error control techniques such as block and conventional codes, as well as comparisons between FEC and ARQ. Laboratory work is included in this course. Prerequisite: ENSC 327.

ENSC 429-4 Digital Signal Processing
Discrete time signals and systems, sampling and quantization. The Discrete Fourier Transform and fast transforms. Digital filters, IIR and FIR, design procedures and implementations. Quantization noise in digital filters and transforms. Random signals, the response to linear systems to random signals. Introduction to adaptive systems. Introduction to system architectures for digital signal processing. Laboratory work includes familiarization with digital signal processing software packages. Prerequisite: ENSC 327 or 328, and 380.

ENSC 440-4 Capstone Engineering Science Project
This capstone design course is based around a project that consists of researching, designing, building, and testing the hardware implementation of a working system. The course also includes material on how to design for safety, engineering standards, and human factors. Prerequisite: at least 110 credit hours. Corequisite: ENSC 350. Students with credit for ENSC 340 cannot take ENSC 440 for further credit.

ENSC 440W-4 Capstone Engineering Science Project
This capstone design course is based around a group project that consists of researching, designing, building, and testing the hardware implementation of a working system. The course also includes material on how to design for safety, engineering standards, and human factors. Prerequisite: at least 110 credit hours. Corequisite: ENSC 350. Students with credit for ENSC 340 cannot take ENSC 440 for further credit.

ENSC 441-3 Capstone Design Technical Project I
Students will combine their technical, marketing, and entrepreneurial knowledge to conceive, and design
a product. Also includes project documentation and project management. At the end of the term a comprehensive report is required. Prerequisite: ENSC 312 and 100 credit hours. Corequisite: ENSC 306.

ENSC 442-3 Capstone Design Technical Project II

Students will apply their technical, marketing and entrepreneurial knowledge to develop a product that was designed earlier in ENSC 441. Students will then present their design. It is possible to see it to a panel of engineers, business and investment community members. Prerequisite: ENSC 441.

ENSC 450-4 VLSI Systems Design

An introduction to the design of Very Large Scale Integrated (VLSI) circuits and systems (System-on-Chip, SoC) using mainly CMOS technology. System design, and application. An advanced digital design flow based on the VHDL hardware description language will be introduced and exercised in the labs. Prerequisite: ENSC 225 and ENSC 350.

ENSC 451-4 Real-Time and Embedded Control Systems

Focuses on implementation and design of embedded computer control systems used in mechatronics and other applications. Many of these systems are real-time in nature, meaning that the computer system must discern the state of the world and react to it within stringent response-time constraints. Upon completion of the course, the student will have a basic understanding of how to design, build and integrate hardware and software for an embedded control application. Hands-on experience will be gained by performing laboratory experiments and doing an embedded computer control project on a mechatronic system. Prerequisite: ENSC 332, 383, and completion of 90 credit hours.

ENSC 460-462-4 Special Topics in Engineering Science

Studies in areas not included within the undergraduate course offerings of the engineering science program. Prerequisite: permission of the director.

ENSC 472-4 Rehabilitation Engineering and Assistive Devices

Provides students with exposure to essential topics in rehabilitation engineering and the design of assistive devices. The course is organized into weekly modules, each of which includes a basic path through the modules: (a) Introduction to related rehabilitation engineering technology, and a laboratory/project component. All modules will provide students with (a) an understanding of the scientific basis for a specific area of rehabilitation engineering, (b) experience in the application of standard medical technologies for disability assessment, (c) exposure to biomechanical and physiological measurement, (d) experience in the design (including ISO standards), construction, and evaluation of technological solutions to enhance mobility, communication, sensory function, cognition, and independence in daily activities. Prerequisite: ENSC 372, KIN 201, 308, 448.

ENSC 474-4 Biomedical Signal and Image Processing

Develops signal processing techniques of wide applicability, presented in the context of processing and analysis of biomedical images. Forms a sequel to the course ENSC 374-4, Introduction to Biomedical Imaging, which covers acquisition of medical images. The subsequent visualization, processing and analysis tools applied to multidimensional signals such as 2D/3D medical images are covered. Students will become proficient in several basic tools used in signal processing at the multidimensional counterparts for image processing. Prerequisite: ENSC 380-4 and either ENSC 327-4 or ENSC 328-1.

ENSC 476-4 Biophotonics

Basic physics of light-biomatter interactions and tissue optics. With this background students will embark on a lab course that is meant to introduce effects in bio-systems, diagnostic techniques and instrumentation, therapeutic instrumentation and applications, introduction to optical tomography, and finally they will learn about recent developments in optical sensors and applications. Lectures are accompanied by laboratory activities ending with a few basic evaluation projects and a final design and fabrication project. After this course the students will be able to evaluate feasibility of new photonic-based medical devices, such as diagnostic tools and light treatment technologies, and design and optimize these devices. Prerequisite: ENSC 376.

ENSC 481-4 Designing for Reliability

Aspects of quality control and reliability in manufacturing environments will be discussed, including stress and strain, failure modes, reliability testing, statistical and experimental methods, and destructive/non destructive testing. Prerequisite: ENSC 330.

ENSC 483-4 Modern Control Systems

Analytical representation of the finite dimensional linear systems, analysis and design of linear feedback control systems based on the state space model, and state/output feedback. Topics include: review of the linear spaces and operators, mathematical modelling, state space representation and canonical forms, controllability, observability, realization of transfer function, and solutions to the realization problem. Applications include: stability concepts and definitions. Lyaunov’s Direct Method, design of the state and output feedback control systems, eigenspectrum assignment, and state estimator design. Prerequisite: ENSC 383.

ENSC 484-4 Industrial Control Systems

Examines modern industrial control systems and applications. Topics include: review of industrial sensors and actuators; computer interfacing; ladder logic and programmable controllers; industrial computer and programming methods; industrial networks; human-machine interfaces; supervisory control and data acquisition (SCADA); manufacturing execution systems; and enterprise-wide integration. Prerequisite: ENSC 332, 383.

ENSC 488-4 Introduction to Robotics


ENSC 489-4 Computer Aided Design and Manufacturing

Survey of methods for computer aided design and manufacturing (CAD/CAM), including experience with basic systems in the laboratory component of the course. The student will be introduced to computer integrated manufacturing and flexible manufacturing systems concepts. The use of finite element modeling and analysis will be presented through examples from thermal studies as well as mechanical stress analysis. Issues in constructing and using integrated CAD/CAM in a production environment will be discussed. Emphasis will be on the use of such techniques in light industry, particularly related to electronics manufacturing. A manufacturing cell consisting of several robots and computer control systems will be available for student projects. Prerequisite: ENSC 380.

ENSC 491-1 Special Project Laboratory

This course is intended for students wishing to pursue laboratory research on a specific topic outside the standard course offerings. Each student must be sponsored by a faculty member who will oversee the project. A proposal of the student’s special project must be submitted to the school at least one month prior to the start of the semester in which the course will be taken. The credit value of the project will be assessed during this review phase and the student will be directed to register in the appropriate course. Upon completion of a special project laboratory course, the student must submit a copy of the ‘deliverables’ to the chair of the undergraduate curriculum committee. Prerequisite: permission of the undergraduate curriculum committee chair.

ENSC 492-2 Special Project Laboratory

This course is intended for students wishing to pursue laboratory research on a specific topic outside the standard course offerings. Each student must be sponsored by a faculty member who will oversee the project. A proposal of the student’s special project must be submitted to the school at least one month prior to the start of the semester in which the course will be taken. The credit value of the project will be assessed during this review phase and the student will be directed to register in the appropriate course. Upon completion of a special project laboratory course, the student must submit a copy of the ‘deliverables’ to the chair of the undergraduate curriculum committee. Prerequisite: permission of the undergraduate curriculum committee chair.

ENSC 493-3 Special Project Laboratory

This course is intended for students wishing to pursue laboratory research on a specific topic outside the standard course offerings. Each student must be sponsored by a faculty member who will oversee the project. A proposal of the student’s special project must be submitted to the school at least one month prior to the start of the semester in which the course will be taken. The credit value of the project will be assessed during this review phase and the student will be directed to register in the appropriate course. Upon completion of a special project laboratory course, the student must submit a copy of the ‘deliverables’ to the chair of the undergraduate curriculum committee. Prerequisite: permission of the undergraduate curriculum committee chair.

ENSC 494-4 Special Project Laboratory

This course is intended for students wishing to pursue laboratory research on a specific topic outside the standard course offerings. Each student must be sponsored by a faculty member who will oversee the project. A proposal of the student’s special project must be submitted to the school at least one month prior to the start of the semester in which the course will be taken. The credit value of the project will be assessed during this review phase and the student will be directed to register in the appropriate course. Upon completion of a special project laboratory course, the student must submit a copy of the ‘deliverables’ to the chair of the undergraduate curriculum committee. Prerequisite: permission of the undergraduate curriculum committee chair.

ENSC 495-4 Introduction to Microelectronic Fabrication

This provides an introduction to the practice and theory of semiconductor integrated circuit fabrication. The practical area will be covered in lectures and reinforced with laboratory experience where the students will manufacture diodes, transistors and...
small circuits. Major areas covered will be: clean room technology and economics, silicon wafer production, thermal oxidation, photolithography, thin film deposition (evaporation, sputtering, chemical vapor deposition), etching (wet, plasma, sputtering, reactive ion), diffusion, ion implantation, multi-layer conductor technology, packaging, device yields, plus examples in CMOS and bipolar IC’s. This course is directed at any student with a basic background in transistors, circuits, and an introductory course in electronics. It is also an optional course for those in engineering physics. Prerequisite: ENSC 222 or 225.

ENSC 499-3 Engineering Science Thesis Proposal
Supervised study, research and preliminary work leading to a formal proposal for the thesis project work in ENSC 499. This activity can be directly augmented by other course work and by directed study. The locale of the work may be external to the University or within a University laboratory, or may bridge the two locations. Supervision may be by technical personnel at an external organization, or by faculty members, or through some combination. At least one of the Supervisors must be a registered Professional Engineer. A plan for the student’s ENSC 498 activities must be submitted to the school at the time of registration in the course. Completion of the undergraduate thesis project proposal is the formal requirement of this course and the basis upon which it is graded. Grading will be on a pass/fail basis. Prerequisite: at least 115 credits or permission of the academic supervisor.

ENSC 499-9 Engineering Science Undergraduate Thesis
A thesis is based on the research or development project that incorporates a significant level of engineering design. This work is typically undertaken in the student’s final year, but in no case before the student has completed 115 credit hours. Registration for ENSC 499 takes place in the semester in which the thesis will be presented and defended. The locale of the work, supervision and other arrangements follow those for ENSC 498. Grading of the thesis will be on a pass/fail basis, but recognition will be given to outstanding work. Prerequisite: ENSC 498.

ENSC 801-3 Linear Systems Theory

ENSC 802-3 Stochastic Systems
The application of probabilities in theory, random variables and stochastic processes in the analysis and modelling of engineering systems. Topics include: a review of probability and random variables; random deviate generation; convergence of random sequences; random processes; auto correlation and power spectral-density; linear systems with stochastic inputs; mean-square calculus; AR and ARMA models; Markov chains; elementary queuing theory; an introduction to information theory. Areas of application include digital communications, speech and image processing, control, radar and Monte Carlo simulations. Prerequisite: Graduate standing.

ENSC 803-3 Writing for Publication
Through discourse analysis and simulation of the publication process, ENSC 803 enables the analysis and refinement of writing processes and written styles when preparing journal and technical conference presentations, and poster presentations in professional contexts. Students will write and revise an article suitable for publication in a professional journal, design a poster presentation, and design and deliver an oral conference presentation. Additionally, students will blind review a peer’s journal article and will participate in a series of team-based discourse analysis exercises. ENSC 803 will also cover departmental requirements and University regulations related to thesis and dissertation submission. This course will not count towards the student’s CGPA but will appear as a grade on the transcript. This course cannot be used as one of the course requirements towards the degree.

ENSC 805-3 Advanced Digital Communications
This course discusses the fundamental techniques used in the physical layer of a digital communication system. The main topics are as follow: digital modulation, including complex baseband representation, the concept of signal space, optimal demodulation, bit error probability analysis, as well as timing and carrier recovery; error control techniques, including soft decision decoding and the Viterbi algorithms; and various kinds of equalization (linear, decision feedback, and maximum likelihood sequences estimation). Sub topics of the equalization section include pulse shaping and eye diagrams. The emphasis may vary slightly in different offerings. Prerequisite: ENSC 428 or equivalent. ENSC 802 (as a corequisite) or permission of instructor.

ENSC 806-3 Spread-Spectrum Communications
This course first overviews the characteristics of spread-spectrum systems (S3) in view of the tradeoff between signal bandwidth and benefits that result from wideband signaling. The basic S3 techniques such as direct-sequence (DS), frequency-hopping (FH), time-hopping (TH), and hybrid of above, are introduced and compared in details. A performance consideration is given for the DS and FH cases to illustrate the processing gain with respect to narrowband signaling in the presence of interference and jamming. Next, it covers all aspects of spread-spectrum transmission over a physical multiple-access channel: signal generation, synchronization, error-correcting coding of spread spectrum multiple access, known as CDMA (Code Division Multiple Access), signals. It relates these physical layer functions to link and network layer protocols involving cellular coverage, Erlang capacity, and network control. Prerequisite: ENSC 802 or permission of instructor.

ENSC 810-3 Statistical Signal Processing
Processing techniques for continuous and discrete signals with initially unknown or time-varying characteristics. Parameter estimation: Bayes, MAP, maximum likelihood, least squares, the Cramer-Rao bound. Linear estimation, prediction, power spectrum estimation, lattice filters. Adaptive filtering by LMS and recursive least squares. Kalman filtering. Eigenmethods for spectral signal processing. Implementation issues and numerical methods of computation are considered throughout. Prerequisite: ENSC 802 and 429 or their equivalents.

ENSC 815-3 Multirate Signal Processing
An advanced digital signal processing course. Topics include: sampling rate conversion; multirate and pulse amplitude modulation; Nyquist theory; multirate filter banks and the discrete wavelet transform; modulated filter banks. Applications are drawn from areas such as transmultiplexing, echo suppression, signal compression and modulation. Prerequisite: ENSC 429 or equivalent.

ENSC 820-3 Engineering Management for Development Projects
This course focuses on the management and reporting activities of typical engineering development projects. Through seminars and case studies, the student will build the student’s skills at estimating project cost and schedule, keeping a project on track, and handing over the completed project to a customer or another team. A writing workshop covers strategies for writing proposals, and writing and controlling documentation. Note that ENSC 820 will not count towards the course work requirement of students enrolled in the MACg and PhD programs. Prerequisite: permission of instructor.

ENSC 832-3 Mobile and Personal Communications
Propagation phenomena, modulation techniques and system design considerations for mobile and personal networks. Topics include: fading and shadowing, noise and interference effects, analog and digital transmission, cellular design, multiple access techniques. Prerequisite: ENSC 802 or permission of instructor.

ENSC 833-3 Network Protocols and Performance
This course covers the techniques needed to understand and analyze modern communications networks. The main topics are as follow: practical techniques for the design and performance analysis of data communication networks; performance analysis of error control, flow and congestion control, and routing; networks of queues using stochastic and mean value analysis; polling and random access LANs and MANs; wireless networks; broadband integrated services digital networks and asynchronous transfer mode; optical networks. Prerequisite: ENSC 802 or permission of instructor.

ENSC 834-3 Fundamentals of Optical Communication
This course discusses modern fibre optics communication systems. The major topics to be covered are as follow: the analysis of optical transmission media, including multimode and single mode technology; bandwidth limitations imposed by dispersive behavior of fibre; modified fibre profiles for third generation fibre communication systems; sensors; semiconductor laser characteristics and theory; modulation; PIN photo diodes and avalanche photo detector; bandwidth and noise limitations; optical amplifiers; semiconductor laser amplifiers; doped fibre amplifiers; optical receiver and transmitter circuits; quantum limited receiver performance; BER performance; optical communication networks.

ENSC 835-3 Communication Networks
Techniques needed to understand and analyze modern data communications networks. Basic architecture of packet networks and their network elements (switches, routers, bridges), and the protocols used to enable transmission of packets through the network. Techniques for collection, characterization, and modeling of traffic in packet networks. Aspects of traffic management, such as call admission control and congestion control algorithms in packet networks and the influence of traffic on network performance. Prerequisite: ENSC 427 or permission of the instructor.

ENSC 850-3 Semiconductor Device Theory
Detailed treatment at the graduate level of semiconductor fundamentals and theory. Electronic properties and characteristics of semiconductors and semiconductor devices: pn junctions, Schottky barrier junctions, silicon-based heterojunctions and ohmic contacts; bipolar junction transistors; field effect transistors; heterostructures; charge coupled devices
and microwave devices. Prerequisite: PHYS 365 or permission of instructor.

**ENSC 851-3 Integrated Circuit Technology**
Review of semiconductor physics. Technology of semiconductor devices and integrated circuits: material evaluation, crystal growth, doping, epitaxy, thermal and electrical characterization, lithography, and device patterning, and thin film formation. Design and fabrication of active and passive semiconductor devices, packaging techniques and reliability of integrated circuits.

**ENSC 852-3 Analog Integrated Circuits**
Models for integrated circuit activity and passive devices and their implementation; computer aided design tools and their use in designing analog integrated circuits; analysis of single transistor amplifiers; current sources, current mirrors, and voltage transport, the deep submicron approximations, and circuit design examples; frequency response of integrated circuits; noise in integrated circuits; low power integrated circuits; non-linear analog integrated circuits. The students will be required to either design, fabricate and test ICs in the microelectronics lab, or do a project which involves the design, analysis, modeling and simulation of an analog integrated circuit. Prerequisite: ENSC 850 or permission of instructor.

**ENSC 853-3 Digital Semiconductor Circuits and Devices**
MOS device electronics. Second Order Effects in MOS transistors. BJT device electronics. Static and transient analysis of inverters. Digital gates, circuits and circuit techniques. Speed and power dissipation. Memory systems. Gate arrays, semicustom and customized integrated circuits. CAD tools. Students are required to complete a project.

**ENSC 854-3 Integrated Microsensors and Actuators**
Microelectronic transducer principles, classification, fabrication, and application areas. Silicon micromachining and its application to integrated microelectronic sensors and actuators. CMOS compatible micromachining, static, dynamic and kinematic microactuator fabrication. Integrated transducer system design and applications. Students will be required to complete a micromanufacturing project in the microfabrication lab at ENSC. Prerequisite: ENSC 370, 453, 495 or permission of instructor.

**ENSC 855-3 Modern Semiconductor Devices**
The course will present the physical concepts required (or fair appreciation for) the field of high performance, high speed semiconductor devices used in telecommunication systems. Topics include: basic semiconductor energy band structure, low and high field transport in semiconductors, ballistic transport, and beyond, heterostructures, band line-ups, lattice mismatched heterostructures strain as design parameter, charge recombination, operating principles of modern semiconductor devices such as SiGe or III-V HBTs, MESFETs/HEMTs, photodetectors, quantum well lasers.

**ENSC 856-3 Compound Semiconductor Device Technology**
The course will present the necessary tools and techniques required in the fabrication of compound semiconductor devices. Because of the wide disparity between III-V and silicon devices, the course is orthogonal to the silicon device fabrication course ENSC 851. Topics to be covered include: basics of HBTs and HEMTs, elements of III-V compound semiconductor material science, III-V substrate preparation and properties, doping of III-V compounds and amphoteric behavior, epitaxial growth by MBE, MOCVD, characterization of epitaxial layers, lithography: optical and electron beam, Schottky and ohmic contact formation, plasma processing techniques such as RIE and PECDV.

**ENSC 857-3 Electronics for Digital Imaging**
This course is targeted towards graduate level engineering students and covers major aspects of the electronic circuit design and device fabrication of digital imaging circuits used in imaging applications stemming from silicon semiconductor technology. These integrated image sensors are appearing in a wide variety of applications ranging from amorphous silicon flat panel imagers for medical imaging to low cost, crystalline silicon integrated circuit cameras. Integrated image sensor technology offers the benefits of a cost-effective, imaging system capable of performing on-chip signal processing functions leading to higher image quality. Prerequisite: ENSC 224, or equivalent, ENSC 325 or equivalent.

**ENSC 858-3 VLSI Systems Design**
Topics of relevance to the design of very large scale integrated (VLSI) circuits in CMOS technologies are covered. Key design techniques and fundamental limitations for high-speed computer and communication ICs such as those found in the microelectronics lab, or a project which involves the design, analysis, modeling and simulation of an integrated circuit. Prerequisite: ENSC 850 or equivalent, or permission of the instructor.

**ENSC 859-3 Biomedical Microdevices and Systems**
This course introduces students to microdevices and systems with applications in biology, chemistry, and medicine. Topics include microfabrication techniques of biocompatible materials including polymers, microfluidic theory and components; electro-osmotic flow and separation techniques; system integration; and a selection of key applications including micro total analysis systems, cell and tissue applications, implantable/transdermal devices, biosensors, and biotechnology (PCR, DNA chips). Recommended, ENSC 330; ENSC 495/4951 or ENSC 854.

**ENSC 861-3 Source Coding in Digital Communications**
This course presents basics of information theory and source coding with applications to speech/audio, images/video and multimedia. The course first covers the topics of entropy, information, channel capacity, and rate-distortion functions. Various techniques used in source coding, such as entropy coding, scalar and vector quantization, prediction, transforms, analysis by synthesis, and model based coding are then discussed. Prerequisite: ENSC 802 or equivalent.

**ENSC 863-3 Optimal Control Theory**
Overview of finite dimensional linear systems represented in state space formulation. Bellman’s principle of optimality and dynamic programming with applications to control of discrete and continuous time systems. Introduction to variational calculus, Pontryagin’s maximum principle, the Hamilton-Jacoby-Bellman Equation, and variational treatment of control problems. Several optimal control problems such as optimal linear quadratic regulator (LQR), optimal tracking and suboptimal output controllers will be discussed. Prerequisite: ENSC 483 or 801.

**ENSC 877-3 Computational Robotics**
A main goal of computational robotics is to automatically synthesize robot motions to achieve a given task. This course discusses geometric and algorithmic issues that arise in such an endeavour. For example: how can a robot plan its own collision-free motions? How does it grasp a given object? How do we account for uncertainty? The course employs a broad range of tools from computational geometry, mechanics, algorithms and control. The material covered also finds applications in designing devices for automation and in computer animation. The course involves a substantial project which exposes students to practical and algorithmic issues involved in building automatic motion planning capabilities for robotic systems. Prerequisite: ENSC 438 and a basic course in data structures and algorithms, or permission of the instructor.

**ENSC 888-3 Finite-Element Methods in Engineering**
Overview of FEM and its use in industry mathematical foundations of FEM; Galerkin method; finite element interpretation of physical problems in one, two and three dimensions; numerical techniques for storing and solving sparse matrices; checking for convergence, error estimation; pre- and post-processing; automatic mesh generation.

**ENSC 890-3 Advanced Robotics: Mechanics and Control**
Robotic applications are extensively involved in various fields such as manufacturing and health care with new, efficient tools and methods having been developed for modelling and co-ordinating such devices. The main focus of this course is to introduce these tools and methods for kinematic and dynamic modelling approaches. These new approaches allow more intuitive and geometrical representation of motion and interaction in any articulated multi-body system such as robotics devices. The course offers valuable background for students involved in computer graphics (e.g. animation), human/machine interface (e.g. haptic interface), control engineers (e.g. trajectory planning, master/slave system) and robotic designers. The course involves individual projects in modelling and co-ordination of a robotic device. Prerequisite: introductory course in robotics (ENSC 488) or permission of the instructor.

**ENSC 891-3 Directed Studies I**
ENSC 892-3 Directed Studies II
**ENSC 894-3 Special Topics I**
**ENSC 895-3 Special Topics II**
**ENSC 896-1 MEng Project (Completion)**
Students who do not complete ENSC 897 in one semester must register for this course in all subsequent semesters.

**ENSC 897-3 MEng Project**
ENSC 898-6 MSc Thesis
ENSC 899-6 PhD Thesis

**English ENGL**

**Faculty of Arts and Social Sciences**

**ENGL 101W-3 Introduction to Fiction**
Examines selected works of literature in order to develop a critical awareness of literary techniques and contexts in the representation of experience. May include the comparative study of works in related literary and artistic genres, and will pay some attention to literature of the 20th century. Includes attention to writing skills. Writing/Breadth-Humanities.

**ENGL 102W-3 Introduction to Poetry**
Examines selected works of literature in order to develop a critical awareness of literary techniques and contexts in the representation of experience. May include the comparative study of works in related literary and artistic genres, and will pay some attention to literature of the 20th century. Includes attention to writing skills. Writing/Breadth-Humanities.

**ENGL 103W-3 Introduction to Drama**
Examines selected works of literature in order to develop a critical awareness of literary techniques and contexts in the representation of experience. May include the comparative study of works in related literary and artistic genres, and will pay some attention to literature of the 20th century. Includes attention to writing skills. Writing/Breadth-Humanities.
attention to literature of the 20th century. Includes attention to writing skills. Writing/Breadth-Humanities.

ENGL 104W-3 Introduction to Prose Genres
The literary study of a variety of prose genres, such as the essay, biography, autobiography, travel narrative, and journalistic writing. May include works which challenge the boundary between fiction and non-fiction. The course is intended to develop a critical awareness of literary techniques and contexts in the representation of experience. Includes attention to writing skills. Writing/Breadth-Humanities.

ENGL 105W-3 Introduction to Issues in Literature and Culture
An introduction to the study of literature within the wider cultural field, with a focus on contemporary issues across genres and media. Writing/Breadth-Humanities.

ENGL 199W-3 Introduction to University Writing
An introduction to reading and writing in the academic disciplines. Writing.

ENGL 201-3 Medieval Literature
Anglo-Saxon literature and Middle English literature, in translation when necessary. Prerequisite: two 100 division English courses. Students who have taken ENGL 204 may not take this course for further credit. Breadth-Humanities.

ENGL 203-3 Early Modern Literature
A survey of the literature of the period from 1485 to Milton. Prerequisite: two 100 division English courses. Students who have taken ENGL 204 may not take this course for further credit. Breadth-Humanities.

ENGL 205-3 Restoration and Eighteenth Century Literature
A survey of the literature of the period from 1660 to 1800. May include writing from North America. Prerequisite: two 100 division English courses. Breadth-Humanities.

ENGL 206-3 Nineteenth Century Literatures in English
The study of nineteenth century North American, British, and/or Post-colonial literatures. May include some writing from North America. Prerequisite: two 100 division English courses. Breadth-Humanities.

ENGL 207-3 Twentieth Century Literatures in English
The study of twentieth century North American, British, and/or Post-colonial literatures. Prerequisite: two 100 division English courses. Breadth-Humanities.

ENGL 210-3 Writing and Critical Thinking
Advanced practice of writing critical, expository prose in a rhetorical context. Prerequisite: Two 100-level English courses, one of which must be 199 or 3 transfer credits in English writing.

ENGL 214-3 History and Principles of Rhetoric
Introduction to the history and principles of rhetoric, and their application to the creation and analysis of written, visual, and other forms of persuasion. Prerequisite: two 100 division English courses.

ENGL 216-3 History and Principles of Literary Criticism
The study of selected works in the history of literary criticism, up to and including modern and contemporary movements in criticism. Prerequisite: two 100 division English courses.

ENGL 300-4 Old English
The study of the basics of the Old English language and the reading of several texts of relative simplicity. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 304-4 Studies in Medieval Literature
Studies of medieval authors, genres or issues, from 500-1500. Texts will be studied in the original language or in translation. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 306-4 Chaucer
The study of selected works by Geoffrey Chaucer, especially The Canterbury Tales, read in the language in which they were written and situated in the context of 14th century European culture. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 310-4 Studies in Early Modern Literature Excluding Shakespeare
The study of non-Shakespearean Early Modern Literature. May be defined by genre, theme, or author. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 311-4 Early Shakespeare
A study of the works of William Shakespeare performed before 1601. Prerequisite: two 100 division English courses, and two 200 division English course. Students may take both ENGL 311 and 313 for credit towards the English major. Students with credit for ENGL 312 may not take this course for further credit without permission of the department.

ENGL 313-4 Late Shakespeare
A study of the works of Shakespeare performed after 1600. Prerequisite: two 100 division English courses, and two 200 division English courses. Students may take both ENGL 311 and 313 for credit towards the English major. Students with credit for ENGL 312 may not take this course for further credit without permission of the department.

ENGL 320-4 Studies in 18th Century Literature (1660-1800)
The study of selected works of late seventeenth century and eighteenth century literature, with an emphasis on genres other than the novel. May include some writing from outside Britain, and may be organized by various critical issues or approaches. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 322-4 Studies in the Eighteenth Century British Novel
The study of selected 18th century novels, situated in their cultural context. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 327-4 Studies in Romantic Literature
Address issues in Romantic literature in English. May include texts in a variety of genres and be organized according to various critical approaches. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 330-4 Studies in Victorian Literature
Addresses specific issues in Victorian literature in English. May be organized by author, genre, or critical approach and may include literature from outside of Britain. Prerequisite: two 100 division English courses and two 200 division English courses. Students with credit in ENGL 329 or 333 may not take this course for further credit.

ENGL 340-4 Studies in 20th Century British Literature before 1945
The study of selected works of British literature written from 1900 to 1945. May be organized by various critical issues or approaches. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 342-4 Studies in British Literature since 1945
The study of selected works of British literature written since 1945. May be organized by various critical issues and approaches. Prerequisite: two 100 division English courses, and two 200 division English courses.
ENGL 384-3 Crime and Literature
Questions of crime and criminal justice in novels and other forms of fiction are explored. Includes a critical discussion about crime plots, their social settings and outcomes, the psychology and sociology of criminal characters and their victims, and whether justice was achieved or denied in the course of the plot. Writing intensive. Prerequisite: for students in an approved English plan only: two 100 division ENGL courses and two 200 division ENGL courses. This course is identical to CRIM 384 and both courses cannot be taken for credit. Students who have taken CRIM 416/417/418 as Crime and Literature may not take this course for further credit.

ENGL 387-4 Studies in Children’s Literature
The study of children’s literature from different periods and places. The works will be considered in relation to literary theory, and may be organized by different critical issues or approaches. Prerequisite: two 100 division English courses, and two 200 division English courses. Students with credit for ENGL 367 may not take this course for further credit.

ENGL 392-4 Studies in World Literatures in English
The study of a selection of literary works in English, mainly from regions other than Canada, Britain and the United States. The course may focus on one or several literatures. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 399-3 Big Stories
The tracing of a specific narrative, type of narrative, or theme across a broad expanse of time and a variety of cultures. Designed for none-English majors. Prerequisite: 60 credit hours. This course may not be counted for credit toward an English major or minor. Breadth-Humanities.

ENGL 400W-4 Advanced Old English
Intensive study of several Old English poems. Prerequisite: ENGL 300. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 404W-4 Topics in Medieval Literature
Advanced study of specific aspects of Medieval literature. May be organized by author, genre, or critical approach. Prerequisite: ENGL 304 or 306. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 407W-4 Topics in Early English Drama
The study of selected dramatic works written in English, mainly from the fifteenth to the eighteenth century. May be organized by author, genre, or critical approach. Does not include Shakespeare. Prerequisite: one of ENGL 304, 306, 310, 311, or 313. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 410W-4 Topics in Early Modern English Non-Dramatic Literature
The study of selected works of Early Modern poetry and prose written in English, and situated in their cultural context. May be organized by author, genre, or critical approach. Prerequisite: one of ENGL 310, 311, or 313. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 416W-4 Milton
The intensive study of selected works by John Milton, situated in their cultural context. Prerequisite: One of ENGL 310, 311, or 313. Students who have taken ENGL 316 may not take this course for credit. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 420W-4 Topics in 18th Century Literature
Addresses specific issues in 18th century literature in English. May be organized by author, genre, or critical approach. Prerequisite: ENGL 320 or 322. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 427W-4 Topics in the Romantic Period
Addresses specific issues in romantic literature in English, may be organized by author, genre, or critical approach. Prerequisite: ENGL 327. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 434W-4 Topics in the Victorian Period
Examines issues in Victorian literature and culture in a variety of genres and media from diverse geopolitical regions organized by various critical questions and approaches. Prerequisite: ENGL 330. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 435W-4 Topics in the Literature of the Long 19th Century
Explores issues across nineteenth century literature and culture in a variety of genres and media from diverse geopolitical regions organized by various critical questions and approaches. Prerequisite: ENGL 330 or 340. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 436W-4 Topics in Literature of Transition
Examines changes in society, culture and literature in the transition from the late-nineteenth to early-twentieth century, through a selection of works in a variety of genres and media from diverse geopolitical regions organized by various critical issues and approaches. Prerequisite: one of ENGL 330, 340, 347, or 354. Students who have taken ENGL 336 may not take this course for further credit. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 438W-4 Topics in Modernism
Addresses specific issues in modern literature. May include Canadian, British, American and other literatures. Prerequisite: ENGL 340, 347, or 354. Reserved for English honors, major, joint major and minor students. Students who have taken ENGL 338 may not take this course for further credit. Writing.

ENGL 440W-4 Topics in British Literature Post 1945
The intensive study of selected works of British literature written after 1945. May be organized by author, genre, or critical approach. Prerequisite: ENGL 342. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 441-4 Directed Studies A
Prerequisite: two 100 division English courses, two 200 division English courses and two 300 division English courses. Reserved for English honors, major, joint major and minor students. Admission is by permission of the instructor and the department.

ENGL 442-2 Directed Studies B
Prerequisite: two 100 division English courses, two 200 division English courses and two 300 division English courses. Reserved for English honors, major, joint major and minor students. Admission is by permission of the instructor and the department.

ENGL 443-4 Directed Studies C
Prerequisite: two 100 division English courses, two 200 division English courses, and two 300 division English courses. Reserved for English honors, major, joint major and minor students. Admission is by permission of the instructor and the department.

ENGL 444-2 Directed Studies D
Prerequisite: two 100 division English courses, two 200 division English courses and two 300 division English courses. Reserved for English honors, major, joint major and minor students. Admission is by permission of the instructor and the department.

ENGL 447W-4 Topics in American Literature before 1900
The intensive study of selected works of American literature written before 1900. May be organized by author, genre, or critical approach. Prerequisite: ENGL 347. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 449W-4 Topics in American Literature since 1900
The intensive study of selected works of American literature written since 1900. May be organized by author, genre, or critical approach. Prerequisite: ENGL 349. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 453W-4 Aboriginal Literatures
The intensive study of selected works of aboriginal writers. May be organized by author, genre, or critical approach. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 454W-4 North American Poetry and Poetics
The intensive study of selected works of North American poets and/or poetry theorists. May be organized by author, genre, or critical approach. Prerequisite: one of ENGL 354, 357, or 359. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 461-3 Practicum
First semester of work experience in the English Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 30 semester hours with a CGPA of 3.0; credit or standing in any two of ENGL 101, 102, 103, 104, 105, and 199, and two 200 division English courses, one of which must be ENGL 204 or 205. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding their first semester.

ENGL 462-3 Practicum II
Second semester of work experience in the English Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of ENGL 461 and normally 60 semester hours with CGPA of 3.0; credit or standing in any two of ENGL 101, 102, 103, 104, 105, and 199, and two 200 division English courses, one of which must be ENGL 204 or 205. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

ENGL 463-3 Practicum III
Third semester of work experience in the English Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of ENGL 462 and normally 60 semester hours with CGPA of 3.0; credit or standing in any two of ENGL 101, 102, 103, 104, 105, and 199, and two 200 division English courses, one of which must be ENGL 204 or 205. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

ENGL 464-3 Practicum IV
Fourth semester of work experience in the English Co-operative Education Program. Credits from this course do not count towards the credits required for
an SFU degree. Prerequisite: successful completion of ENGL 463 and normally 75 hours with CGPA of 3.0; credit or standing in any two of ENGL 101, 102, 103, 104, 105, and 199, and two 200 division English courses, one of which must be ENGL 204 or 205. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

ENGL 465W-4 Topics in Critical Theory
Advanced seminar in literary theory. Prerequisite: ENGL 364. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 468W-4 Topics in Drama
Advanced seminar in drama. May be organized by author, genre, or critical approach. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 470W-4 Studies in the English Language
Focused studies within linguistic, pragmatic, historical and social theories of the English language. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 475W-4 Topics in Rhetoric
Seminar in a particular topic, approach, or author in the field of rhetoric and writing. Prerequisite: ENGL 375. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 482W-4 Topics in Cultural Studies
Investigates interconnections between literature and culture through the study of selected texts. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 484W-4 Topics in Literature and Media
Investigates and theorizes the relation of literature and media (manuscript, print, visual, aural, electronic, and/or oral). Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 486W-4 Topics in Gender, Sexuality and Literature
The study of selected literary works as they intersect with and are shaped by issues of gender and sexuality. May be organized by theme, critical approach, historical period, or individual author. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 492W-4 Topics in World Literatures in English
The intensive study of a selection of literary works in English, mainly from regions other than Canada, Britain and the United States. The course may focus on one or several literatures or individual, authors, and will be organized according to specific critical methodologies. Prerequisite: one 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 494-4 Honors Research and Methods Seminar
Introduces students enrolled in the English honors program to the basic methodological issues and procedures that define the field, and provides them with the opportunity to work with a faculty supervisor in researching a specific topic for their honors graduating essay. Prerequisite: permission of the department, plus normally a minimum of 90 credit hours, including credit or standing in two 100 division English courses, two 200 division English courses, and four 300 or 400 division English courses, one of which must be ENGL 364.

ENGL 496-4 Honors Graduating Essay
In addition to regular meetings with their supervisors, students will attend a scheduled research seminar. Prerequisite: lower division requirements for the English major. Open only to students who have been accepted into the English honors program. Admission is by permission of the instructor and the department.

ENGL 810-4 Studies in Theory I
Provides a detailed and contextual overview of critical debates in twentieth-century literary and cultural theory. The critical lineage explored will vary according to theoretical focus.

ENGL 811-4 Studies in Theory II
Explores specific critical issues, approaches, or movements in literary and cultural theory. The course will vary according to theoretical and historical focus.

ENGL 820-4 Studies in Print Culture Theory
Introduces the history of print culture along with a variety of theoretical approaches. Students enrolled in the Print Culture program are required to take this course.

ENGL 821-4 Studies in Manuscript, Print and Media Culture
Explores critical issues, approaches, or movements in manuscript, print, and media culture. The course will vary according to geographical and historical focus and theoretical approach.

ENGL 830-4 Studies in Medieval Literature
Examines selected medieval works in a variety of genres from Britain and Europe, organized by critical issues or theoretical approaches. May include works in a variety of media and study texts in the original language or in translation.

ENGL 831-4 Studies in Early Modern Literature
Examines selected works of the sixteenth and seventeenth centuries organized by critical issues or theoretical approaches. May include some writing from outside Britain.

ENGL 832-4 Studies in Eighteenth-Century Literature
Examines selected eighteenth-century works in a variety of genres organized by cultural movements, critical issues, or theoretical approaches. May include works in a variety of media and from diverse geopolitical regions.

ENGL 833-4 Studies in Nineteenth-Century Literature
Examines selected nineteenth-century works in a variety of genres organized by cultural movements, critical issues, or theoretical approaches. May include works in a variety of media and from diverse geopolitical regions.

ENGL 834-4 Studies in Twentieth-Century Literature
Examines selected twentieth-century works in a variety of genres, organized by cultural movements, critical issues, or theoretical approaches. May include works in various media and explore Canadian, British, American and other literatures.

ENGL 835-4 Studies in Contemporary Literature
Examines selected contemporary literary works in a variety of genres, organized by cultural movements, critical issues, or theoretical approaches. May include works in various media and explore Canadian, British, American and other literatures.

ENGL 840-4 Studies in American Literature
Examines selected works of American literature in a variety of genres, organized by cultural movements, critical issues, theoretical approaches, or historical periods. May include works in various media, and explore relations between American and other national or regional literatures.

ENGL 841-4 Studies in Canadian Literature
Examines selected works of Canadian literature in a variety of genres, organized by cultural movements, critical issues, theoretical approaches, or historical periods. May include works in various media, and explore relations among Canadian, Quebec, American, British, World literatures.

ENGL 842-4 Studies in British Literature
Examines selected works of British literature in a variety of genres, organized by cultural movements, critical issues, or theoretical approaches. May include works in various media. The historical and geographical focus of the course will vary.

ENGL 843-4 Studies in Colonial, National, and Diasporic Literatures
Examines selected colonial, national, and diasporic literatures in a variety of genres, organized by cultural movements, critical issues, or theoretical approaches. May include works in various media, and explore relations between Aboriginal and relevant national literatures. The historical and geographical focus of the course will vary.

ENGL 850-4 Studies in Globalization, Literature, and Culture
Examines the debates and interconnections among globalization, literature, and culture. May explore other media in relation to globalization. The course will vary according to theoretical and historical focus.

ENGL 851-4 Studies in Popular Literature and Culture
Investigates interconnections between literature and popular culture through a variety of texts. The course will vary according to theoretical and critical approach, selection of media, and geographical and historical focus.

ENGL 852-4 Studies in Gender, Sexuality, and Literature
Investigates intersections among gender, sexuality, and literature in a variety of writings and cultural contexts. The course will vary according to theoretical and critical approach, selection of media, and geographical and historical focus.

ENGL 853-4 Studies in Postcolonial Literature
Examines postcolonial theories and literatures in a variety of genres. The course will vary according to critical approach, selection of media, and geographical and historical focus.

ENGL 854-4 Studies in Poetics
Examines theories of poetic production and issues related to the history and distribution of poetry through literary communities. May emphasize active practice alongside theories of poetic production, and may also draw upon the resources of the SFU Library’s Contemporary Literature Collection. The historical and geographical focus of the course will vary.

ENGL 860-4 Studies in Writing and Rhetoric
Focuses on the study and application of rhetorical theories. May include theories and topics in writing and composition.

ENGL 870-874-4 Topics in Language and Literature
Specific topics will vary from offering to offering.

ENGL 875-4 Directed Studies
ENGL 880-4 Pro-seminar I
A professional seminar that provides students with a grounding in pedagogy and introduces professional aspects of English studies. Course will be graded Satisfactory/Unsatisfactory.

ENGL 881-4 Pro-seminar II
A professional seminar that provides students with a grounding in pedagogy and introduces professional aspects of English studies. Course will be graded Satisfactory/Unsatisfactory.

Environmental Science EVSC Faculty of Science
EVSC 200-3 Introduction to Environmental Science
Introduction to the multi-disciplinary subject of environmental science. The course is presented in two parts. Basic concepts and application of the scientific method to problems in environmental science are presented in part I. Case studies which highlight the basic concepts covered in part I are presented in part II. Students with credit for ENPL 200 may not take EVSC 200 for further credit. Recommended: REM 100 Breadth-Science.

EVSC 380-3 Practicum I
First semester of work experience in the Environmental Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the science co-operative education program.

EVSC 381-3 Practicum II
Second semester of work experience in the Environmental Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: EVSC 380 and re-admission to the science co-operative education program.

EVSC 401-1 Current Topics in Environmental Science
This seminar course will expose students to a variety of speakers who will discuss a wide range of topics in environmental science. This course is required by all students wishing to graduate with a major in Environmental Science. Prerequisite: declared major in environmental science; completed third year course requirements of environmental science major.

EVSC 480-3 Practicum III
Third semester of work experience in the Environmental Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: EVSC 381 and re-admission to the science co-operative education program.

EVSC 481-3 Practicum IV
Fourth semester of work experience in the Environmental Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: EVSC 480 and re-admission to the science co-operative education program.

EVSC 482-3 Practicum V
Optional fifth semester of work experience in the Environmental Science Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree.

Prerequisite: EVSC 481-4 and readmission to the science co-operative education program.

EVSC 491-3 Advanced Field Studies in Environmental Science
Apply the theories and methods of environmental science to evaluate quantitatively the environmental impact of an industry on a selected site. The site can vary from year to year. This laboratory course brings together students from all streams of the Environmental Science Program, and the field work will be conducted by small groups of students. Prerequisite: standing in the environmental science program, with at least 30 upper division credits, or permission of the program director.

EVSC 491W-3 Advanced Field Studies in Environmental Science
Apply the theories and methods of environmental science to evaluate quantitatively the environmental impact of an industry on a selected site. The site can vary from year to year. This laboratory course brings together students from all streams of the Environmental Science Program, and the field work will be conducted by small groups of students. Prerequisite: standing in the environmental science program, with at least 30 upper division credits, or permission of the program director.

Explorations EXPL Faculty of Arts and Social Sciences
EXPL 110-3 Organizing Society
An interdisciplinary introduction to the analysis of social organization, with specific attention to identity, institutions, and environment. Corequisite: EXPL 125. Enrolment restricted to students accepted into the Explorations program. Breadth-Social Sciences.

EXPL 120-3 Experiencing Society
An interdisciplinary approach to creative and cultural forms of expression that reflect on an individual’s perception of social experience. Prerequisite: EXPL 110. Enrolment restricted to students accepted into the Explorations program. Breadth-Humanities.

EXPL 130-3 Global Development: Issues and Patterns
An interdisciplinary survey of issues and patterns in development across the globe since European industrialization. Prerequisite: enrolment restricted to students accepted into the Explorations program. Breadth-Social Sciences.

EXPL 140-3 Immigration: Identities, Histories, Voices
A study of immigrant experiences and of the historical context of immigration, through thematic or historical topics, selected case studies, and interdisciplinary scholarship in the Arts. Prerequisite: enrolment restricted to students accepted into the Explorations program.

EXPL 150-3 Introduction to Research Approaches in the Social Sciences
An interdisciplinary examination of the nature and processes of social research, with a focus on research conducted in the local community. Prerequisite: EXPL 110, 120. Corequisite: EXPL 160. Enrolment restricted to students accepted into the Explorations program. Breadth-Social Sciences.

EXPL 160-3 Introduction to Research and Interpretation in the Arts
An interdisciplinary introduction to research and interpretation in Arts based scholarship. Prerequisite: EXPL 110, 120. Corequisite: EXPL 150. Breadth-Humanities.

EXPL 170-3 Regional Cultures
An interdisciplinary study of regional cultures and the ways in which regional cultures influence each other. Topics will be explored through one or more extended case studies and may include: the arts, history, religion, environment, everyday life, travel and trade. Prerequisite: EXPL 110, 120. Enrolment restricted to students accepted into the Explorations program.

EXPL 310-3 Selected Topic I
Provides an in-depth, interdisciplinary investigation of a selected theoretical, historical, or contemporary topic, primarily from Social Science perspectives. Topics, research approaches, assignments, and projects will vary from semester to semester. Prerequisite: 30 credit hours in the Faculty of Arts and Social Sciences including EXPL 150, 160 and a minimum 6 credit hours at the 200 level; or 45 credit hours in the Faculty of Arts and Social Sciences.

EXPL 320-3 Selected Topic II
Provides an in-depth, interdisciplinary investigation of a selected theoretical, historical, or contemporary topic primarily from Arts perspectives. Topics, research approaches, assignments, and projects will vary from semester to semester. Prerequisite: 30 credit hours in the Faculty of Arts and Social Sciences including EXPL 150, 160 and a minimum 6 credit hours at the 200 level; or 45 credit hours in the Faculty of Arts and Social Sciences.

First Nations Studies FNST Faculty of Arts and Social Sciences
FNST 101-3 The Cultures, Languages and Origins of Canada’s First Peoples
An introduction to the nature and goals of First Nations studies as an academic discipline; survey of prehistory, traditional cultures and aboriginal languages of Canada’s First Nations.

FNST 201-3 Canadian Aboriginal Peoples’ Perspectives on History
An examination of fact and ideology in history and historic events involving contact between native and European peoples. The course will also address questions of research methodologies in studying Native-European relations, such as the evaluation of oral history and written ethnohistoric sources. An additional focus will be on gender as it influences perspectives. Pre/corequisite: FNST 101.

FNST 301-3 Issues in Applied First Nations Studies Research
Involves a survey and examination of method, theory and related topics associated with contemporary First Nations Studies research in applied contexts. Ethical conduct and protocols for working within First Nations communities are reviewed. Prerequisite: FNST 101 and 201. Recommended: SA 255 or equivalent lower division research methods course.

FNST 322-3 Special Topics First Nations Studies
Prerequisite: will vary according to the topic.

FNST 332-3 Ethnobotany of BC First Nations
This course is an introduction to the study of plant knowledge and use by First Nations peoples in British Columbia. It provides students with information about the role of plants in First Nations’ cultures including such areas as foods, medicines, technology, ceremony, ecological indicators, and within First Nations’ knowledge and classification systems. Special focus may be placed on the ethnobotany of one or more Aboriginal groups or culture areas. Prerequisite: FNST 101 or by permission of the department.

FNST 401-3 Aboriginal Rights and Government Relations
An examination of First Nations and aboriginal peoples’ perspectives on political, social and legal issues involving their rights as first citizens of Canada.
and North America, and the practical and political relations with various levels of government. Issues examined include: aboriginal rights and title questions, self government models and concepts, constitutional priority is given to undergraduate students, including their impact on women's lives, and native community and First Nations politics. Prerequisite: FNST 101 and 201. Recommended: POL 221.

FNST 402-3 The Discourse of Native Peoples
Style and structure of native people's discourse about their culture, world view, history and matters affecting their lives. Includes the analysis of selections from native oral literature, autobiography, expository writing, modern poetry and fiction. Prerequisite: FNST 101 and 201.

FNST 403-3 Indigenous Knowledge in the Modern World
This course explores the subject of traditional indigenous knowledge and its contemporary implications for First Nations programs in such areas as economic development, ecotourism, spiritualism, language retention, biodiversity, ethnocentrism, environmentalism, and heritage conservation. First Nations perspectives on patents, copyrights, and other creative products from traditional culture will also be examined through lecture, guest speakers and seminar presentation. Prerequisite: FNST 201 or by permission of the department.

FNST 442-3 Directed Readings in First Nations Studies
Directed readings for upper level students in First Nations Studies who wish to study selected topics in depth. Prerequisite: nine credit hours in First Nations Studies. Corequisite: permission of an instructor and program chair.

Foundations of Academic Literacy FAL
Faculty of Education
FAL X99-4 Foundations of Academic Literacy
An introduction to the kinds of reading and writing students will encounter in lower-division courses across the university disciplines. Important aspects of the writing process are discussed and illustrated in class, and students receive individual feedback on their academic writing. Students who wish to use the course to meet the language proficiency prerequisite of a writing-intensive course must obtain a C or better. Enrollment priority is given to undergraduate students who have not yet met the language proficiency prerequisite of a writing-intensive course. Students who receive less than a C grade on their first attempt at the course may re-enroll. No student may attempt the course more than twice. Credits for this course do not count toward the credits required for an SFU degree; however, the course grade is included in the calculation of the student's cumulative GPA.

Foundations of Analytical and Quantitative Reasoning FAN
Department of Mathematics
FAN X99-4 Foundations of Analytical and Quantitative Reasoning
Designed for students who need to upgrade their mathematics background in preparation for SFU Q courses. Also recommended for students who wish to refresh skills after several years away from mathematics. An in-depth look at what mathematics is; mathematical reasoning, problem solving and math study skills; review of fundamental topics and concepts of mathematics and their real-world applications. This course aims to develop students' math study skills, confidence in their quantitative abilities, and to learn how understanding mathematics is both one of the keys to mastering other disciplines, and useful in everyday situations. Credits for this course do not count toward the credits required for an SFU degree; however, the course grade is included in the calculation of the student's cumulative GPA.

French FREN
Faculty of Arts and Social Sciences
FREN 120-3 French for Beginners
An introduction to basic vocabulary, grammatical structures, and speech patterns. Emphasis on oral expression and listening comprehension. Instruction in class and in lab. Prerequisite: never studied or experienced French before. Students with credit for FREN 099 may not take this course for further credit.

FREN 121-3 Introductory French I
A comprehensive introduction to basic grammatical structures, vocabulary and pronunciation. Emphasis on oral communication skills. Instruction in class and in lab. Prerequisite: FREN 099 or 120 or less than grade 11 French (equivalent based on placement test). Students with credit for FREN 100 may not take this course for further credit.

FREN 122-3 Introductory French II
Continuation of FREN 121. Designed to improve speaking and writing abilities by introducing more complex structures and vocabulary. Instruction in class and in lab. Prerequisite: FREN 100 or 121 or grade 11 French (or equivalent based on placement test). Students with credit for FREN 101 may not take this course for further credit.

FREN 185-3 Practicum I
First semester of work experience in the French Co-operative Education program. Students should apply to the Faculty of Arts and Social Sciences Co-op Education co-ordinator two semesters in advance. Credits from this course do not count toward the credits required for an SFU degree. Prerequisite: A minimum of 30 credit hours including French courses to the level of FREN 215 (or equivalent placement) and a minimum CGPA of 2.75.

FREN 198-3 French for Reading Knowledge I
For students with little or no background in French who wish to acquire the ability to read periodicals, journals and basic literary and academic texts. May not be taken by students with French 12 or with FREN 151 (or equivalent). Prerequisite: FREN 120 or higher (or their equivalents). Prerequisite: for French immersion program students or those who have studied in a Francophone milieu. Placement test required. Students with credit for FREN 201 or 211 or 216 may not take this course for further credit.

FREN 215-3 Intermediate French: Oral Practice
Designed to develop listening comprehension and oral expression. Instruction in class and in lab. Prerequisite: FREN 201 or 211. May be taken concurrently with FREN 212. Students with credit for FREN 205, 300 or 330 may not take this course for further credit.

FREN 217-3 French Pronunciation
Designed to improve pronunciation. Instruction in class and in lab. Prerequisite: FREN 201 or 211. May be taken concurrently with FREN 212. Students with credit for FREN 312 may not take this course for further credit.

FREN 221-3 French Writing I
A reading and writing course with emphasis on vocabulary and logical structure in written expression. Instruction in class, in lab and online. Prerequisite: FREN 201 or 211, or FREN 212 or 216, or with a grade of A, FREN 151 or 210. In the latter case, FREN 211 and 221 may be taken concurrently. Students with credit for FREN 202 may not take this course for further credit.

FREN 222-3 French Writing II
Focusing on grammar and grammatical analysis, and the process of writing. Instruction in class and online. Prerequisite: FREN 202 or 221, or with a grade of A, FREN 201 or 211, or, with a grade of A, FREN 212 or 216. Students with credit for FREN 206 may not take this course for further credit.

FREN 225-3 Topics in French Language
The topic will be pronounced, French for Professional Purposes, Practice in Translation, or French and the Media. Prerequisite: FREN 206 or 222 (or equivalent based on placement test). Students with credit for FREN 220 may not take this course for further credit.

FREN 230-3 Introduction to French-Canadian Literature
This will serve to introduce the student to French Canadian thought through literature and the arts. The course will be conducted in French. Prerequisite: any one of FREN 206, 220, 299 or 301. Breadth-Humanities.

FREN 240-3 Introduction to French Literature: Modern French Literature
This will serve to introduce the student to French contemporary thought through literature. This course will be conducted in French; the object is to acquire a reading facility and a critical appreciation of modern French literature. Prerequisite: any one of FREN 206, 222, 299 or 301. Breadth-Humanities.

FREN 270-3 Introduction to French Linguistics I
An introduction to the phonetics of French and to the linguistic concepts upon which phonological and morphological descriptions of French are based. Prerequisite: FREN 206 or 222, or FREN 301. Quantitative.

FREN 285-3 Practicum II
Second semester of work experience in the French Co-operative Education program. Students should apply to the Faculty of Arts and Social Sciences Co-op Education co-ordinator two semesters in advance. Credits from this course do not count toward the credits required for an SFU degree. Prerequisite: A minimum of 45 credit hours including French courses to the level of FREN 215 (or equivalent placement), successful completion of FREN 185, and a minimum CGPA of 2.75.
FREN 300-3 Advanced French: Oral Practice
Designed to develop ability in oral expression. Instruction in class and in lab. Prerequisite: FREN 206 or 222 or, with a grade of A and permission of instructor, FREN 205 or 215.

FREN 301W-3 Advanced French Composition
A writing course to improve organization and argumentation, paragraph structures and lexical accuracy. Instruction in class and online. Prerequisite: FREN 206 or 222, or, with a grade of A, FREN 202 or 221. Writing.

FREN 304-3 Advanced French Grammar
Continuation of FREN 222, with emphasis on grammatical analysis. Instruction in class and online. Prerequisite: FREN 206 or 222 (or equivalent based on placement test). Students with credit for FREN 302 may not take this course for further credit.

FREN 307-3 French Vocabulary
Designed to expand vocabulary and optimize the use of dictionaries and electronic language resources. Instruction in class and in lab. Prerequisite: FREN 206 or 222. Students with credit for FREN 311 may not take this course for further credit.

FREN 320-3 Field School: Special Topics in French I
Selected studies in French language, linguistics, literature or civilization. Prerequisite: FREN 206 or 222, and FREN 230 or 240, and 270. May be taken only by field school participants. Corequisite: FREN 321, 322.

FREN 321-3 Field School: Special Topics in French II
Selected studies in French language, linguistics, literature or civilization. Prerequisite: FREN 206 or 222, and FREN 230 or 240, and FREN 270. May be taken only by field school participants. Corequisite: FREN 320, 322.

FREN 322-3 Field School: Special Topics in French III
Selected studies in French language, linguistics, literature or civilization. Prerequisite: FREN 206 or 222, and FREN 230 or 240, and FREN 270. May be taken only by field school participants. Corequisite: FREN 320, 321.

FREN 330-3 Francophone World
A multidisciplinary analysis of socio-cultural aspects of French speaking countries, involving written work and oral participation. Prerequisite: FREN 206 or 222 or permission of instructor. Breadth-Humanities.

FREN 342-4 Literature in Translation from the Francophone World
A study of representative and significant works (from one or more French speaking countries) from literature and cinema originally produced in French in their socio-cultural context. Prerequisite: knowledge of French is not required; two courses in literature. This course does not count towards the degree requirements for an extended minor, major or honors in French. With permission of the Department of English, may count towards the requirements of an English major or honors.

FREN 360-4 Intermediate French Literature
Introduction to critical analysis based on the study of texts from the Middle Ages to the 19th century. Prerequisite: FREN 230 or 240.

FREN 370-4 Introduction to French Linguistics I
An introduction to the fundamental concepts and techniques used in the linguistic analysis of the morphosyntax, lexicology and semantics of French. Prerequisite: FREN 270. Quantitative.

FREN 385-3 Practicum III
Third semester of work experience in the French Co-operative Education program. Students should apply to the Faculty of Arts and Social Sciences Co-op Education co-ordinator two semesters in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: A minimum of 60 credit hours including French courses to the level of FREN 222 (or equivalent placement), successful completion of FREN 285, and a minimum CGPA of 2.75.

FREN 410-3 French Stylistics
Introduction to the application of linguistic concepts, pragmatics, discourse analysis and text analysis. Historical: the study of a variety of French texts. Prerequisite: all of FREN 301, 360 and 370. Students with credit for FREN 406 may not take this course for further credit.

FREN 411-3 Aspects of French Morphology
Analysis of selected topics of the morphological system of modern French. Prerequisite: FREN 301 and 370.

FREN 412-3 Aspects of French Syntax
Analysis of selected grammatical problems in French syntax. Prerequisite: FREN 301 and 370.

FREN 413-3 Aspects of French Phonetics and Phonology
Analysis of selected topics of the sound system of modern French. Prerequisite: FREN 301 and 370.

FREN 415-3 Aspects of French Semantics and Lexicology
Study of diachronic and synchronic organization of semantic and lexical fields. Formation and evolution of French vocabulary. Prerequisite: FREN 301 and 370. Students with credit for FREN 420 may not take this course for further credit.

FREN 442-3 Topics in the History of French
Studies of selected topics in French historical linguistics. Subject matter may include external history, history of sound changes, morphological and syntactic changes. Prerequisite: FREN 301 and 370. Students with credit for FREN 407 and/or 408 may not take this course for further credit.

FREN 442-4 Topics in French Linguistics
The subject matter will vary according to faculty and student interests. Selected aspects of French linguistic theories as they apply to the study, teaching and/or learning of French. Prerequisite: FREN 301 and 370. Students with credit for FREN 414 may not take this course for further credit.

FREN 425-3 Topics in the Varieties of French
Study of selected topics in French dialectal variation. Subject matter may include, but is not limited, to French Dialects, Canadian French and French Creoles. Prerequisite: FREN 301 and 370. Students with credit for FREN 421 and/or 422 may not take this course for further credit.

FREN 430-3 Topics in French-Canadian Literature
Prerequisite: FREN 301 and 360.

FREN 452-3 Topics in French Culture
Study of selected topics relating to French cultures. Topics may include, but are not limited to, French culture in British Columbia, Studies in Bilingualism, Sociolinguistics of French. Prerequisites: FREN 301, FREN 230 or FREN 240, and FREN 270.

FREN 461-3 French Medieval Literature
Medieval French literature with special emphasis on a genre, on an author, or on a region. Prerequisite: FREN 301 and 360.

FREN 462-3 French Renaissance Literature
A study of French Renaissance works and literary genres in their historical and cultural contexts. Prerequisite: FREN 301 and 360.

FREN 463-3 Literature of the Seventeenth Century
Prerequisite: FREN 301 and 360.

FREN 465-3 Literature of the Eighteenth Century
Prerequisite: FREN 301 and 360.

FREN 467-3 Romanticism
Prerequisite: FREN 301 and 360.

FREN 470-3 Realism to Naturalism
Prerequisite: FREN 301 and 360.

FREN 472-3 The Contemporary Theatre
Prerequisite: FREN 301 and 360.

FREN 474-3 French Poetry
Prerequisite: FREN 301 and 360.

FREN 475-3 The Contemporary Novel
Prerequisite: FREN 301 and 360.

FREN 476-3 Interdisciplinary Approaches in French Literature
A study of French and francophone literature from an interdisciplinary point of view. Topics will vary to include different disciplines: history, cultural studies, gender studies, psychology or the study of the relationships between literature and other media, i.e. cinema. Prerequisite: FREN 301 and 360.

FREN 480-2 Seminar I
Study in depth of an area covered by a French literature or linguistics course in the 400 division. Prerequisite: FREN 230 or 240, and FREN 360; or FREN 301 and FREN 306 or 370, or by permission of the course chair. To be taken in conjunction with a 400 division course in French linguistics or literature.

FREN 485-3 Practicum IV
Fourth semester of work experience in the French Co-operative Education program. Students should apply to the Faculty of Arts and Social Sciences Co-op Education co-ordinator two semesters in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: A minimum of 75 credit hours including French courses to the level of FREN 301 (or equivalent placement), successful completion of FREN 385, and a minimum CGPA of 2.75.

FREN 491-3 Readings in French Linguistics and/or Literary Criticism
Guided reading in selected topics. May only be taken during the last two semesters of study; required as a preparation for the honors essay but may be taken by other students with consent of the instructor.

FREN 492-3 Honors Essay
Candidates for honors will be required to submit a major paper on a topic of a comprehensive nature in literature or linguistics to be approved by the course chair. Prerequisite: FREN 491 and at least nine 400 division courses in French literature and/or French linguistics.

FREN 803-5 Research Methods in French Linguistics and/or French Literature
The study of research methods and tools used in French linguistics and/or French literature. Planning a research project is required to complete the course.

FREN 804-5 Topics in the Structure of French I
Explores a selection of classic problems of the structure of French (phonology, morphology, syntax, lexicology or semantics) applying a variety of theoretical viewpoints, from a diachronic or synchronic perspective.
FREN 805-5 Topics in the Structure of French II
Explores, from a variety of diachronic or synchronic theoretical viewpoints, a selection of classic problems of the structure of French not covered in FREN 804.

FREN 806-5 Topics in the Acquisition of French
New trends and theoretical developments in the acquisition of French as a second language. Study of the contribution of linguistic theory to the teaching and learning of French.

FREN 810-5 Pragmatics and the Structure of French
Explores a selection of themes in the pragmatics of French, for example paralinguistic features of French, phonostylistics, contrastive structures (French/English). A variety of practical applications may be envisaged: pedagogy, translation, stylistic analysis, etc.

FREN 811-5 Topics in the Varieties of French
An in-depth study of one of the many varieties of French (in France and in the world) from linguistic and/or sociolinguistic viewpoints, i.e. popular French, Canadian French, French-based Creoles.

FREN 812-5 Approaches to the Linguistic Analysis of French
Studies the contributions made by a selection of French language specialists to the evolution of various aspects of linguistic theory.

FREN 816-5 Sociolinguistic Approaches to French Studies
Explores the relationship between language, society and identity in France and/or in the French-speaking world. The study, from an integrative point of view, of social markers in speech, conversational rules, objective versus subjective norms, attitudes towards language variation and their implications among French speakers. French bilingualism, language planning and the place of French in the world.

FREN 820-5 Types of Discourse
A study of the language in use, discourse strategies, the enunciation devices of various types of texts, both traditional and non-traditional genres such as oral or para-literary texts.

FREN 821-5 Theories and Methods of Literary Analysis
A study of a selection of significant works by contemporary French critics (Barthes, Genette, Kristeva). The application of their theories and models to the analysis of specific works. May concentrate on one area, e.g. narratology, semiotics, etc.

FREN 822-5 Socio-Cultural Approaches to French Literature
Provides a framework for a detailed study of French literature within its socio-cultural context.

FREN 823-5 Interdisciplinary Approaches to French Literature
Explores the relationships between French literature and other arts or applies concepts and models developed in other disciplines to the study of French literature.

FREN 824-5 Topics in French Canadian Literature
An in-depth study of a theme or an aspect of French Canadian Literature through different literary works.

FREN 825-5 Topics in French Literature
An in-depth study of a topic relating to a period or a movement in French literary history, such as: Middle Ages, Renaissance, Classical Period, Enlightenment, Romanticism, Realism, Naturalism, Existentialism.

FREN 826-5 Monographic Studies
An in-depth study of one writer from a specific theoretical perspective (psychological, historical, linguistic).

FREN 897-6 MA Project

FREN 888-5 MA Thesis

FREN 999-5 Field Examination

Gender Studies GDST
Faculty of Arts and Social Sciences
GDST 200-3 Thinking About Gender
An introduction to the major critical debates on gender from an interdisciplinary and cross-cultural perspective. Topics include the construction and regulation of gender and the relation between gender and ideologies of sexuality, race, class and nation. Breadth-Humanities.

GDST 300-4 Mapping Masculinities
Maps the field of masculinity studies and explores its intersections with feminist, postcolonial, queer, and critical race theories. Prerequisite: GDST 200.

GDST 301-4 Queer Gender
Introduces students to current debates on gender identity and gender difference from the perspectives of queer subjects. Explores recent theoretical and cultural works on gender from queer, trans, queer, and feminist perspectives, while examining the challenges they pose to current understanding of sex, gender, sexuality, and the body. Prerequisite: GDST 200. Students who have taken WS 301 Special Topic: Theorizing Queer Genders may not take this course for further credit.

General Studies GS
Faculty of Arts and Social Sciences
GS 420-429-3 Selected Topics for Integrated Studies
These selected topics are offered only through integrated studies programs within the Bachelor of General Studies degree. They explore fields of professional practice through interdisciplinary approaches not available in regular academic departments. Prerequisite: admission to an integrated studies program. Variable credit hours 3, 4, 5.

Geography GEOG
Faculty of Arts and Social Sciences
GEOG 100-3 Human Geography
This course introduces the basic systematic approaches in the study of contemporary human geography including the distribution of population, spatial aspects of economic, cultural and political development, landscape and resource study. Breadth-Social Sciences.

GEOG 102-3 World Problems in Geographic Perspective
Current world-scale problems are examined in their regional and global contexts, with emphasis being placed on the importance of dynamics of the natural environment in human affairs. Breadth-Social Sciences.

GEOG 111-3 Physical Geography
An introduction to landforms, climates, soils and vegetation; their origins, distributions, interrelationships and roles in the ecosystem. Laboratory work and field trips are included. Breadth-Science.

GEOG 162-3 Canada
The geographical character of Canada; the Canadian environment; regional differences in socio-economic growth. Breadth-Social Sciences.

GEOG 213-3 Geomorphology I
An examination of landforms, processes, laws, and theories of development; types and distributions. Prerequisite: GEOG 111 or EASC 101.

GEOG 214-3 Climatology I
A review of the basic principles and processes involved in physical and dynamic climatology, with particular emphasis on global distributions and change. Prerequisite: GEOG 111. Quantitative.

GEOG 215-3 Biogeography
An examination of the abiotic and biotic factors that control the distribution and development of plant communities, including climatic and ecological change. Prerequisite: GEOG 111. Students granted credit for GEOG 215 may not be granted credit for BISC 204.

GEOG 221-3 Economic Geography
The basic concepts of economic geography, involving consideration of the spatial organization and development of economic and resource based systems. Prerequisite: GEOG 100.

GEOG 241-3 Social Geography
Systematic consideration of the spatial and environmental bases of societies, in historical and cultural perspective. Prerequisite: GEOG 100.

GEOG 250-3 Cartography
An introduction to the interpretation of maps and air photographs. Prerequisite: GEOG 100 or 221 or 241 and 111.

GEOG 251-3 Quantitative Geography
An introduction to basic quantitative methods and software for the solution of geographic problems. Topics include spatial data measurements, central tendency measures, simple probability theory and distributions, inferential methods, and correlation analysis. Prerequisite: GEOG 100 or 221 or 241 and 111. Quantitative.

GEOG 253-3 Aerial Photographic Interpretation
Uses of aerial photography and air photo interpretation in geography. The course is divided into four sections: (1) technical background regarding aerial photography and photo interpretation; (2) air photo interpretation and mapping; (3) application of air photo interpretation; and (4) introduction to remote sensing. Prerequisite: GEOG 100 or 221 or 241 and 111. Quantitative.

GEOG 255-3 Geographical Information Science I
A basic overview of Geographical Information Systems and Science: GIS software, hardware, data structures and models; spatial data, operations and algorithms; practical applications and limitations. Prerequisite: GEOG 100 or 111 or permission of instructor. Students with credit for GEOG 254 may not take this course for further credit. Quantitative.

GEOG 261-3 Introduction to Urban Geography
This course will introduce basic concepts in the study of urban geography by systematically identifying and examining major components of urban structure. Prerequisite: GEOG 100 or 102 or 30 credit hours. Breadth-Social Sciences.

GEOG 263-3 Selected Regions
A study of the geographical character of a major world region. Prerequisite: At least nine credit hours. This course may not be counted more than once toward a degree. Breadth-Social Sciences.

GEOG 264-3 Canadian Cities
This course will provide a systematic introduction to urbanization in Canada. Topics addressed will include Canadian urbanization as compared with other nations, especially the United States, metropolitan centres, resource towns, and the internal structure of cities. Prerequisite: GEOG 100 or 162 or permission of instructor.
COURSES

GEOG 253-4 Remote Sensing
Applied remote sensing and image analysis. Topics include airborne and spaceborne sensors, remote sensing systems, digital image processing, and applications in environmental monitoring. Prerequisite: GEOG 251 or STAT 270 or 201.

GEOG 355-4 Geographical Information Science II
An examination of the theoretical components of GIS. Topics include spatial representations, generalization and data management, computational algebra and set theory; digital surfaces and terrain models. Prerequisite: GEOG 255. Quantitative.

GEOG 356-4 Cognitive Geovisualization
Spatial cognitive aspects of contemporary geovisualization. Concepts and theory behind real-world navigation, distributed cognition, and spatial knowledge acquisition using familiar and advanced geovisualization interfaces. Prerequisite: GEOG 250, 253 or 255.

GEOG 362-4 Geography of Urban Development
This course will apply the principles of urban geographical analysis to the study of urbanization as exemplified in the development of cities in Europe and North America. Prerequisite: at least 30 credit hours including either GEOG 241 or 261.

GEOG 362W-4 Geography of Urban Development
This course will apply the principles of urban geographical analysis to the study of urbanization as exemplified in the development of cities in Europe and North America. Prerequisite: at least 30 credit hours including either GEOG 241 or 261. Writing.

GEOG 363-4 Urban Planning and Policy
An introduction to the major approaches and key ideas of the professions of urban governance; urban planning and urban policy. Through a focus on contemporary theory, process-based understanding, and specific issues and examples, the course examines key trends and interventions and promotes critical reflection on urban development. Prerequisite: 30 credit hours including one of GEOG 241 or 261.

GEOG 369-4 Human Microgeography
An examination of the reciprocal influences between humans and nature through time. Topics may include settlement, agriculture, technology, politics, urbanization, science, and conservation. Prerequisite: 45 credit hours with nine hours of lower division Geography credits. This course is identical to HIST 377 and students cannot take both courses for credit.

GEOG 377-4 Environmental History
Examines the reciprocal influences between humans and nature through time. Topics may include settlement, agriculture, technology, politics, urbanization, science, and conservation. Prerequisite: 45 credit hours with nine hours of lower division Geography credits. This course is identical to HIST 377 and students cannot take both courses for credit.

GEOG 381-4 Political Geography
Theoretical approaches to the problems of the interactions of political decisions and power structures with territorial organization. Prerequisite: GEOG 241.

GEOG 381W-4 Political Geography
Theoretical approaches to the problems of the interactions of political decisions and power structures with territorial organization. Prerequisite: GEOG 241. Writing.
GEOG 382-4 Population Geography
A survey – from geographic perspective – of data, concepts, themes, and debates in the study of population. Particular concern for population numbers, fertility, mortality and migration over space and time. Prerequisite: GEOG 221 or 241.

GEOG 383-4 Regional Development and Planning I
Theories and concepts of regional development and planning in the advanced capitalist and third-world; methods of spatial analysis. Prerequisite: GEOG 221 and 241.

GEOG 385-4 Agriculture and the Environment
An examination of the relationship between agricultural production systems and the biophysical environment, with emphasis on the origins of, and potential solutions to, agri-environmental degradation. Prerequisite: GEOG 221.

GEOG 386-4 Geography, Health and Health Care
An introduction to the study of health and health care issues from a geographic perspective covering: major spatial influences shaping the health status of populations, the impact of disease, and the delivery of health care services. Prerequisite: GEOG 241 or GERO 300 or SA 218.

GEOG 387-4 Geography and Gender
Geographical perspectives on gender and sexuality. This course investigates feminist theory in geography and its analysis of home, city, nation, state, global economy, colonization, and migration. Prerequisite: GEOG 241.

GEOG 389W-4 Human Ecology: Human Relations to Nature
An examination of concepts and theories relating to the way human populations are shaped by, and shape, their biophysical environments in subsistence, dualistic and capitalist societies. For the last focus, attention is directed to the origins of contemporary environmental degradation and the capacity of various “green” philosophies to amend current human-environment relations. Prerequisite: GEOG 221 or EVSC 200 (formerly ENPL 200). Writing.

GEOG 391-4 Qualitative Research Methods
Research design process and qualitative research methods for human geographers with emphasis on case study methods and research. Provides the rationale, tools, and skills students need to design, conduct, and analyze qualitative research. Prerequisite: One of GEOG 221 or 241 and 8 credits of upper division geography courses.

GEOG 402-3 Geography Practicum II
This is the third semester of work experience in the Geography Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: GEOG 303 and acceptance by the Science and Environment co-operative education program. Students should apply to a co-op co-ordinator in the Science and Environment co-op program by the end of the third week of the preceding semester.

GEOG 403-3 Geography Practicum IV
This is the last semester of work experience in the Geography Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: GEOG 402 and acceptance by the Science and Environment co-operative education program. Students should apply to a co-op co-ordinator in the Science and Environment co-op program by the end of the third week of the preceding semester.

GEOG 404-2 Directed Readings
Designed for upper level geography major and honors students who wish to continue research started in conjunction with an earlier course. Prerequisite: permission to enter directed readings courses requires written consent of both the faculty member willing to supervise the research, and the chair of the department.

GEOG 405-4 Directed Readings
Designed for upper level geography major and honors students who wish to continue research started in conjunction with an earlier course. Prerequisite: permission to enter directed readings courses requires written consent of both the faculty member willing to supervise the research, and the chair of the department.

GEOG 409-3 Geography Practicum V
This is an optional semester of work experience in the Geography Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: GEOG 403 and acceptance by the Science and Environment co-operative education program. Students should apply to a co-op co-ordinator in the Science and Environment co-op program by the end of the third week of the preceding semester.

GEOG 411-4 Hydrology II
An examination of hydrologic processes via experimental and observational studies; measurement and analysis of hydrologic data; application of hydrologic models; recent research developments in selected sub-fields of hydrology. Prerequisite: one of GEOG 311, 313, or 314; one of GEOG 261, STAT 101, 102 or 203 (formerly 103). Quantitative.

GEOG 412-4 Glacial Processes and Environments
A critical evaluation of glacial processes and environments; application of field techniques. Prerequisite: GEOG 312. Writing.

GEOG 413-4 Geomorphology III
Advanced treatment of topics in glacial and fluvial geomorphology with emphasis on current research problems. Prerequisite: GEOG 313.

GEOG 414-4 Climatology III
An examination of recent advances in climatology and application of atmospheric process models. Prerequisite: GEOG 314. Quantitative.

GEOG 415-4 Advanced Biogeography
A survey of advanced biogeographic theory, and techniques of biotic resource management is also examined. Prerequisite: GEOG 315.

GEOG 416W-4 Pleistocene Geography
An examination of the physical geomorphic, pedologic and biotic processes and evidence from human geography of the period will be studied as they affect landscape changes. Prerequisite: one of GEOG 213, 214, 215, 317. Writing.

GEOG 417-4 Soil Science II
Advanced treatment of topics in soil science: soil physics, soil chemistry, soil biology, soil classification and/or forest soils. Prerequisite: GEOG 317.

GEOG 417W-4 Soil Science II
Advanced treatment of topics in soil science: soil physics, soil chemistry, soil biology, soil classification and/or forest soils. Prerequisite: GEOG 317. Writing.

GEOG 420-4 Cultural Geography
A critical study of selected cultural landscapes, practices and meanings in light of recent theoretical developments in geography. Prerequisite: at least 60 credit hours including eight credit hours of upper division geography courses.

GEOG 422-4 Theories and Practices of Development
A geographic study of ‘development’ and ‘underdevelopment’ with particular references to selected lesser developed regions. Prerequisite: at least 60 credit hours including GEOG 111, 221, and 241. This course is identical to LAS 422 and students cannot take both courses for credit.

GEOG 426-4 Industrial Change and Local Development
Relationships between multinational corporations and local development with reference to resource based towns in British Columbia. An analysis of the implications of changes in employment, organization, technology and resource utilization for community economic development. Prerequisite: at least 60 credit hours including GEOG 323 or 383.

GEOG 427-4 Selected Topics in the Geography of Tourism
Selected topics in the geography of tourism. Topics emphasize policy, planning and management issues associated with tourism. Prerequisite: GEOG 327, or permission of the instructor.

GEOG 428-4 World Forests
Comparative analysis of forest industries, ecosystems and policies, and their lessons for forest management in British Columbia. Topics include tropical deforestation and carbon sequestration, the wilderness debate, and forests in culture and the visual arts. Prerequisite: GEOG 315, or 322, or 389.

GEOG 432-4 Problems in Environmental History
An investigation into the major themes and arguments in the environmental histories of North America, emphasizing how different individuals and groups have used, perceived, and managed their environments over time. Prerequisite: 60 credit hours including 8 hours of upper division geography. This course is identical to HIST 432 and students cannot take both courses for credit. Students with credit for HIST 485 in 2001-3 cannot take this course for further credit.

GEOG 440-4 Law and Geography
An examination of the emergent field of law and geography. Topics will include the legal-geographic dimensions of property; the regulation of public space; rights; nature; colonial dispossession; and globalization and the law. Prerequisite: 60 credit hours including eight hours of upper division geography.

GEOG 440W-4 Law and Geography
An examination of the emergent field of law and geography. Topics will include the legal-geographic dimensions of property; the regulation of public space; rights; nature; colonial dispossession; and globalization and the law. Prerequisite: 60 credit hours including eight hours of upper division geography. Writing.

GEOG 441-4 Cities, Space, and Politics
An analysis of the nature of urbanization, having specific reference to theories of urban spatial structure and to comparisons of urbanization in Canada and abroad. Prerequisite: at least 60 credit hours including GEOG 362.

GEOG 444-4 Regional Development and Planning II
The evaluation of regional development planning and practice; case study analysis of regional development programs with particular reference to Canadian experience. Prerequisite: 60 credit hours including GEOG 383.

Simon Fraser University 2007 • 2008 Calendar
GEOG 445-4 Resource Planning
This course introduces the student to the principles and practices of resource planning within a Canadian context. Special attention is paid to land-use planning as it relates to other resource sectors. Prerequisite: GEOG 322 or 385.

GEOG 446-4 Migration and Globalization
This course explores sites of socio-cultural change in a global context. Particular emphasis is placed on regional and international migration and the territorial and geopolitical bases of conflict. Prerequisite: 60 credit hours including eight hours of upper division geography.

GEOG 449-4 Environmental Processes and Urban Development
An examination of environmental processes as they influence, and are influenced by, urban development, with attention to implications for urban policy and planning. Prerequisite: Enrolment in the Post Baccalaureate Program in Sustainable Community Development or 60 credit hours; and one of GEOG 351, 362, 383, 389 or SCD 301 (formerly CED 301).

GEOG 451-4 Spatial Modeling
Spatial models for the representation and simulation of physical, human and environmental processes. GIS and spatial analysis software are used in the laboratory for model development, from problem definition and solution to visualization. Prerequisite: GEOG 291 and one of GEOG 351, 352, 353 or 355. Quantitative.

GEOG 453W-4 Remote Sensing of Environment
Computational aspects of environmental remote sensing. Topics include digital image processing, image enhancement, sensor systems, statistical extraction, and environmental analysis. Prerequisite: GEOG 352 and 353. Quantitative/ Writing.

GEOG 455-4 Theoretical and Applied GIS
A critical examination of advanced topics in GIS, such as: boundary definition, expert systems and artificial intelligence, error and uncertainty, and scale in a digital context. Examines social applications and the roles of GIS in society. Students will design original projects, including data acquisition, analysis, and web site development. Prerequisite: GEOG 355 and pre- or co-requisite GEOG 352. Students with credit for GEOG 452 may not take this course for further credit. Quantitative.

GEOG 457-4 Geovisualization Interfaces
The concepts, theories, and technology behind interactive and immersive interface technologies used for geospatial visualization. Applications and implications for GIScience and spatial knowledge acquisition. Combines GIScience, spatial cognition, and virtual environments/interface research perspectives. Prerequisite: GEOG 351 and 356 (or permission of instructor). Students who have taken GEOG 457 (STT) Geospatial Virtual Environments in fall 2005 or fall 2006 may not take this course for further credit.

GEOG 460-4 Selected Regions
A study of the geographical character of a major world region. Prerequisite: at least 60 credit hours including eight hours of upper division geography courses.

GEOG 462-4 The Geography of the United States
Selected themes in the geography of the United States, addressing the biophysical environment, culture and landscape, resources and livelihood, population and settlement. Prerequisite: at least 60 credit hours including eight hours of upper division geography courses.

GEOG 466-4 Latin American Regional Development
The course introduces students to a geographical analysis of patterns of Latin American development and planning. It is divided into two sections: geographical/historical development of selected countries; and analysis of common Latin American developmental models. A geographical perspective is used which stresses the interconnectedness of spatial and socio-economic structures. Prerequisite: 60 credit hours including eight hours of upper division geography.

GEOG 468-4 Society and Environment in China
An examination of environmental issues facing rural people and their livelihoods in China from a political ecology perspective. Topics include: environmental history and concepts of nature; property rights in land and trees; agriculture; forests; wildlife and biodiversity; grasslands; and water. Prerequisite: At least 60 credits including 8 hours of upper division geography courses.

GEOG 469-4 The Canadian North and Middle North
Special attention will be given to resource appraisal and utilization, spatial organization, and the consideration of future development; comparisons will be made with experience of sub-arctic development in other parts of the world. Prerequisite: at least 60 credit hours including eight hours of upper division geography courses.

GEOG 498-490-4 Selected Topics
The topics will vary from semester to semester depending on the interests of faculty and students. Prerequisite: 75 credit hours including 30 credit hours in geography.

GEOG 491-4 Honors Essay
All candidates for honors will be required to submit a major paper on a geographical topic to be selected in consultation with the department. Prerequisite: 105 credit hours and consent of supervisor. See a departmental academic advisor for details.

GEOG 497-5 International Field Study
A fieldwork based study of a selected region conducted in an international setting. Emphasis is placed on how to understand landscapes by using concepts and models with direct observation, inference and collection of field evidence, as well as published literature on the selected region. Prerequisite: at least 60 credit hours including 12 hours of upper division geography courses.

GEOG 600-0 Introduction to Graduate Studies: fall Semester
Introduction to graduate studies in the Department of Geography at Simon Fraser University, covering formal requirements and practical considerations.

GEOG 601-0 Introduction to Graduate Studies: Spring Semester
Completion of GEOG 600, with an emphasis on the preparation and presentation of the research proposal.

GEOG 604-5 Research Design and Analytical Techniques in Human Geography
Quantitative techniques relevant to human geography are divided into two sections: conceptual and methodological bases of current hydrologic research.

GEOG 614-4 Hydrology
Conceptual and methodological bases of current hydrologic research.

GEOG 612-4 Glacial Geomorphology
Glacial landform-process models; field study of glacial landforms and sediments.

GEOG 613-4 Fluvial Geomorphology
An examination of current conceptual and methodological issues in fluvial geomorphology based on analyses of the primary research literature.

GEOG 614-4 Climatology
Recent theoretical developments in physical climatology.

GEOG 615-4 Quaternary Environments
Recent developments in paleoecology and the study of Quaternary environments.

GEOG 617-4 Soil Science
Soil physics, soil chemistry, soil biology and/or forest soils.

GEOG 620-4 Selected Topics: Economy, Environment and Development
Geographic perspectives on selected topics in economy and environment in Canadian and international contexts.

GEOG 622-4 Theories and Practices of Development
Conditions in the Third World: a review of theories and geographical solutions.

GEOG 626-4 Multinational Corporations and Regional Development
The influence of the policies and structures of multinational corporations on regional economic change.

GEOG 640-4 Selected Topics in Social and Urban Geography
Geographic perspectives on the city in Canadian and international contexts.

GEOG 641-4 Morphogenesis and the Built Environment
Evolution of built environments in urban contexts: morphological change and societal processes.

GEOG 644-4 Regional Development and Planning
Regional development in theory and practice with particular reference to resource based hinterland regions.

GEOG 645-4 Resource Management
Economic, social and political aspects of conservation and resource management.

GEOG 646-4 Cultural Geography
Relationships between cultural geography and related fields, particularly social theory and current philosophy.

GEOG 651-4 Advanced Spatial Analysis and Modeling
Perspectives on the description, analysis and prediction of geographical processes using spatial modeling and decision-making in a GIS environment.

GEOG 653-4 Theoretical and Applied Remote Sensing
Theory and applications of analytical processing procedures used with multispectral remote sensing data.

GEOG 655-4 Advanced Principles of Geographic Information Science
Examines data, data structures and computational methods that underlie GIS description and analysis. Illustrates the social science and science links between computers and geography.

GEOG 656-4 Aerial Reconnaissance for Remote Sensing
Theoretical and practical training in the acquisition of airborne multispectral remote sensing data.
GERO 301-3 Research Methods in Sciences.
Prerequisite: 60 credit hours. Breadth-Social aging, family and community relations of older people, multi-disciplinary perspective. Physical and health Examination of the aging process from a GERO 300-3 Introduction to Gerontology writing, combined with a review of the essential points Practice in comprehension, reading, speaking and of the development of contemporary understanding and of health promotion. Students will be given the opportunity to explore theories and models designed to explain health related behaviors and the determinants of health. Strategies for behavioral change and development of socio-environmental approaches will be discussed in the context of an aging Canadian population. Prerequisite: 60 credit hours. Recommended: GERO 300.
GERO 400-4 Seminar in Applied Gerontology Discussion of current issues in applied gerontology. Interdisciplinary orientation, drawing upon resource persons from within the University and practitioners in the community. Course requirements include participation in a group research project. Prerequisite: 60 credit hours. GERO 300, 301 and two of PSYC 357, GERO 420 or KIN 461.
GERO 401-3 Environment and Aging Impact of the macro- and microenvironment as it affects the aged. Discussion of planned housing and institutional living arrangements, territory and the need for privacy, home range and use of space, urban planning, responsive design of housing and care facilities, effects of relocation and institutionalization. Prerequisite: 60 credit hours. Recommended: GERO 300.
GERO 402-3 Drug Issues in Gerontology Considers pharmacological issues as they apply to older people; uses and abuses of commonly prescribed and non-prescribed medication; medication reviews; government subsidy programs. Prerequisite: 60 credit hours. GERO 300.
GERO 403-3 Counselling Issues with Older Adults An examination of the ways of adapting counselling theory and practice to meet the needs of older adults and their families. Emphasis will be placed on counselling techniques and outcomes appropriate to the needs of persons living independently, with their families, or in institutional settings. Prerequisite: GERO 300 and PSYC 357 or GERO 420.
GERO 404-3 Health and Illness in Later Life An examination of issues related to health and illness among older adults, drawing upon theories and concepts from biology, social and public health sciences. An introduction to assessment and intervention skills useful to persons working with older adults in a broad range of practice settings. Prerequisite: 60 credit hours. GERO 300.
GERO 405-3 Aging in Small Communities and Rural Areas An examination of the demographic trends in aging in small communities and rural areas of Canada, the geographical and social contexts in which these are occurring and the experience of rural communities in assessing needs and providing support services and housing. Prerequisite: 60 credit hours. GERO 300.
GERO 406-3 Death and Dying The focus of this course is to provide the student with an in-depth understanding of the process of dying. By examining the process of dying, one’s personal response to death as well as society’s reaction and responsibilities towards living and dying, the student will gain new insights in caring for the dying person. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 407-3 Nutrition and Aging This course examines specific nutritional conditions and concerns of the aging population. It does so by exploring the nutrient needs of the elderly as determined by physiological changes of aging, metabolic effects of common diseases, and biochemical interactions of medications. The course includes a broad investigation of the psychological, sociological, and physical factors which influence food choice and ultimately nutritional status in aging. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 408-4 Families over the Life Course This course entails a comprehensive interdisciplinary study of families and aging. In addition to providing an overview of theory and research on this topic, a variety of substantive issues will be critically examined, including: families in mid life, sibling relationships, divorce and remarriage, dating in later life, care giving, poverty, elder abuse, and policy development. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 409-3 Mental Health and Aging Psychopathology often presents in distinct ways among older adults. The intent of this course is to examine disorders with their onset in later life and those that extend into later years. Students will derive an understanding of the diagnostic criteria for various disorders, prevalence, theories of etiology, and selected empirically validated interventions. Prerequisite: GERO 300. Recommended: GERO 403, PSYC 241. Students who received credit for GERO 411, when the course was offered under this title, may not take this course for further credit.
GERO 410-3 Special Topics in Gerontology I Selected psychological, sociological, economic, biological and practical aspects of the aging of individuals and populations. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 411-3 Special Topics in Gerontology II Selected psychological, sociological, economic, biological and practical aspects of the aging of individuals and populations. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 412-3 Special Topics in Gerontology III Selected psychological, sociological, economic, biological and practical aspects of the aging of individuals and populations. Prerequisite: 60 semester hours credit. Recommended: GERO 300.
GERO 420-4 Sociology of Aging The structural and behavioral implications of aging. Topics include demographic aspects of aging; the relationship of aging to political, economic, familial and other social institutions; the psychological significance of aging. Prerequisite: GERO 404. This course is identical to SA 420 and students cannot take both courses for credit.
GERO 435-3 Adult Guardianship Law A comprehensive exploration of the law affecting adult guardianship, substitute decision-making, and adult protection in Canada, including a detailed examination of the form, content and philosophical underpinnings of the relevant legislation in British Columbia. Topics include assessing mental incapability, powers of attorneys, living wills and health care directives, end of life decision-making, the law affecting consent to health care, and court-ordered guardianship for adults. Prerequisite: 60 credit hours. Recommended: GERO 300. This course is identical to CRIM 418 and students cannot take both courses for credit. Students who have taken CRIM 418 or GERO 410 may not take this course for further credit.
GERO 801-4 Health Policy and Applied Issues in Gerontology The aim of this course is to examine linkages between long term care and other service sectors as well as to compare programs and services across community, provincial and national boundaries. A
number of key policy issues will be discussed that pertain to the provision of health related services to older adults.

**GERO 802-4 Development and Evaluation of Health Promotion Programs for the Elderly**

This course deals with the design, implementation and evaluation of health promotion programs and services for older persons. Students will participate in the development and critical analysis of a variety of health initiatives aimed at healthful aging.

**GERO 803-4 Analytical Techniques for Gerontological Research**

This course has been specifically designed to provide training in quantitative data analysis using SPSSX Programming Language with a focus on behavioral research problems in gerontology.

**GERO 810-4 Community Based Housing for Older People**

This course presents an in-depth examination of theory, research and policy related to planning, designing, developing and managing housing for independent and semi-independent older adults.

**GERO 811-4 Institutional Living Environments**

This course focuses on design issues, theory, research and policy relevant to planning, developing and managing institutional living environments for dependent adults.

**GERO 820-4 Principles and Practices of Health Promotion**

This course is designed to cover and critically evaluate concepts, models and theories of health promotion and wellness in the aging population. These methods of implementation will be discussed in relation to individual and structural health system issues facing the aged.

**GERO 822-4 Families, Communities and Health**

Critically evaluates and synthesizes key theory, research and health promotion policy related to the intersection of aging families, communities and health. The principal theoretical perspectives will include: life course theory; social, human and cultural capital; ecological models; political economy; and community empowerment approaches.

**GERO 830-4 Human Factors, Technology, and Safety**

This course covers theoretical, research and industry literature pertaining to designing home, work, institutional and public environments that are ergonomically functional, safe, and satisfying to the older adult.

**GERO 840-4 Special Topics in Gerontology**

This course offers an opportunity to offer a specialized course in an area germane to the program but on a topic that is outside of the regular courses.

**GERO 850-0 Co-op Internship**

The internship consists of one full-time work semester. Arrangements for the work semesters are made through the Faculty of Arts Co-op Co-ordinator at least one semester in advance. For further details, students should refer to the Co-operative Education section of the Calendar. Prerequisite: MA students in good standing with a minimum GPA of 3.0 may apply to enter the co-op internship after satisfactory completion of 16 semester hours credit.

**GERO 889-4 Directed Studies**

This course consists of supervised readings in a particular field of specialization relevant to the selected area of concentration.

**GERO 898-6 Project**

A project must be written under committee supervision for formal examination as part of the program requirements for students in the project stream.

**GERO 899-6 Thesis**

A thesis must be written under committee supervision for formal examination as part of the program requirements for students in the thesis stream.

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**Global Health GLOH**

**Faculty of Health Sciences**

**GLOH 540-4 A Global Perspective on the Organization and Delivery of Health Services**

Principles and concepts of organization and delivery of health services worldwide, including ambulatory, hospital, long-term, and mental health care. Problems in developed and resource-constrained nations and the feasibility of solutions. A case studies approach.

**GLOH 615-3 Health Policy-making in Global Context**

A case-study based approach to policy analysis, formation, decision-making and evaluation in global health contexts. Frameworks for developing policy. Program planning and evaluation methodologies.

**GLOH 635-3 Program Planning and Evaluation in Global Health**

Practical approaches to health needs assessment, needs prioritization, health program planning, and health program evaluation in low-to-middle income countries and/or resource-poor settings.

**GLOH 698-14 Practicum/Project in Global Health**

This course is open only to students in the MGH program in their practicum semester, who have developed a practicum proposal satisfactory to their practicum supervisory committee. The practicum study will result in the preparation of a scholarly report on the work experience in the structure of a formal paper. The report will include an analysis of the strategic objectives, confounding variables, recommendations, and discussion of practical strategies for implementation. Students with extensive experience as health professionals will have the option of using their work experience as the basis for their project, report and subsequent capstone experience. Under exceptional circumstances, students may, at the discretion of the MGH Practicum Committee, substitute two extended essays as the basis for their practicum report, and subsequent capstone experience. Prerequisite: Successful completion of five courses in the MGH program.

**GLOH 699-1 Capstone Experience**

This course is intended for MGH students in the semester following completion of the practicum/project report. In this capstone experience, students present their reports for peer-critique in a seminar. Discussion, questions, by the class supervisors and guests follow. Grading will be satisfactory/unsatisfactory. Prerequisite: GLOH 698.

**GLOH 810-3 Health Systems**

Concepts of health, illness, sickness and disease. History and development of health systems, and comparison of the social ethics, organization, and financing of different national health systems. The design of health systems - strengths and weaknesses of alternative systems for health care and delivery. Current strategies for health system reform in resource-rich and resource-constrained nations. A case studies approach. Prerequisite: admission to the MGH program or permission of instructor.

**GLOH 815-3 Health Policy Making in a Global Context**

A case-study based approach to policy analysis, formation, decision-making and evaluation in global health contexts. Frameworks for developing policy. Program planning and evaluation methodologies.

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**GLOH 820-3 Concepts and Principles of Global Health**

International public health focusing on social and biological determinants of health problems that cross national barriers. Relating health problems to current processes of economic and cultural globalization. Understanding and addressing health inequalities, within and between countries. A case studies approach. Prerequisite: Admission to the MGH program or permission of instructor.

**GLOH 830-3 Health Promotion and Disease Prevention – Theory to Practice**

Population health promotion and disease prevention theories, frameworks, and techniques for planning, implementing and evaluating policy and programs in resource-constrained countries. Building collaborations and participatory community-based approaches. Addressing change at the individual, organizational, community, population, and global level. A case studies approach. Prerequisite: Admission to the MScPPH program or permission of instructor.

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**GLOH 835-3 Program Planning and Evaluation in Global Health**

Practical approaches to health needs assessment, needs prioritization, health program planning, and health program evaluation in low-to-middle income countries and/or resource-poor settings.

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**GLOH 840-3 Health, Human Security and Social Justice**

Global health issues which are fundamental to human security, but outside the scope of international security studies. Focus on vulnerable populations, especially gender perspectives on globalization and health. Conflict, humanitarian emergencies and public health.

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**GLOH 850-3 Globalization and Health**

The mechanisms by which globalization impacts health. Roles of technology, economics, legal structures, culture, and social environments. The positive and negative impacts of global trends in trade, ideology, governance, community building, conflict, poverty, and the environment. A case studies approach. Prerequisite: Admission to the MScPPH program or permission of instructor.

**GLOH 880-3 Advocacy and Communication in Global Health**

Health advocacy, the policy framework within which it operates, its key principles, skills, and practice issues. Role, theories, and methods of health communication and advocacy in global health from the community to global level. Useful means: media advocacy, community mobilization, and trans-national collaboration. Use of information technology to promote population health and pro-health policy change. A case studies approach. Prerequisite: Admission to the MScPPH program or permission of instructor.

**GLOH 890-3 Health, Gender and Development**

Central role played by gender in health and development. Relationship of gender inequities to access to and control of resources needed to protect health. Use of gender lens in evaluating health systems and economic outcomes. Practical application of gender in health development approach to health financing, resource allocation policy problems in resource-constrained nations. A case studies approach. Prerequisite: Admission to the MScPPH program or permission of instructor.
GLOH 896-3 Directed Studies in Global Health
Directed studies under the supervision of a faculty member in a topic not otherwise available. This course can be used as an elective for students in the MScPPH program. Reading requisite: admission to the MScPPH program or permission of instructor.

GLOH 897-3 Directed Studies in Global Health
Directed studies under the supervision of a faculty member in a topic not otherwise available. This course can be used as an elective for students in the MScPPH program. Reading requisite: Admission to the MScPPH program or permission of the instructor.

Graduate Studies GRAD
Faculty of Graduate Studies
GRAD 800-0 Visiting Research Student
Graduate students visiting SFU under the Canadian Graduate Student Research Mobility Agreement register for this course.

Greek GRK
Faculty of Arts and Social Sciences
Department of Linguistics
Language Training Institute
GRK 104-3 Modern Greek for Reading Comprehension I
Modern Greek intended for beginners who desire to acquire basic reading comprehension skills. (Distance education) Students who complete this course successfully will be able to enrol in LANG 110. Students who in addition to completing this course also have more advanced verbal skills, will be able to enrol in LANG 160 or 210.

GRK 110-3 Modern Greek for Beginners I
An introduction to the Greek language that helps beginners to help develop survival skills in the most frequently encountered communicative situations. Prerequisite: permission of the instructor. Students with credit for LANG 110 when offered with the same title may not take this course for further credit.

GRK 160-3 Modern Greek for Beginners II
The aim of the course is to give those who have acquired the basic language skills a better understanding of the basic grammar of the Greek, and to develop their speaking and comprehension skills so that they are able to carry out small conversations on topics of general interest. Prerequisites: GRK 110 or permission of the instructor. Students with credit for LANG 160 when offered with the same title may not take this course for further credit.

GRK 210-3 Modern Greek Intermediate I
The aim of the course is to continue developing students’ Greek language skills so that they communicate in situations that extend beyond the basic level. The mediopassive voice for verbs, irregular classes of nouns, and the structure of subordinate sentences are some of the grammatical topics covered. Students will also receive extensive training in speaking, reading and writing at the level of a simple newspaper article. Prerequisite: GRK 160 or permission of the instructor. Students with credit for LANG 210 when offered with the same title may not take this course for further credit.

GRK 260-3 Modern Greek Intermediate II
Continues the work developed in GRK 210 including further training in speaking, reading and writing at an intermediate level. Prerequisites: GRK 210 or permission from the instructor. Students with credit for LANG 260 when offered with the same title may not take this course for further credit.

Health Sciences HSCI
Faculty of Health Sciences
HSCI 101-3 Human Biology
An examination of the biological processes that underlie human health and well-being, with emphasis on the evolutionary and ecological influences affecting human populations.

HSCI 110-3 Perceptions and Misperceptions of Common Health Risks
Factors influencing individual health risk perception, and the causes and consequences of misperception. Collective management of health risks - the myth of total safety, balancing risks, and risk homeostasis. The nature of consent, and the precautionary principle. An introduction to health risk assessment, management, and communication through the presentation and analysis of case-studies.

HSCI 120-3 Introduction to Human Sexuality and Sexual Behavior
Introductory information about human sexuality across a broad spectrum of topics. Sexual function is a fundamental part of a full and healthy life, but misinformation, concerns, problems, and dysfunctions are prevalent. An evidence-based introduction to human sexual function and dysfunction, and normal sexual development across a range of sexual behaviors. A perspective on the effects of socialization on sexual attitudes and behavior.

HSCI 130-3 Foundations of Health Science
How health, illness and disease are defined and measured for individuals and populations. Research strategies used to identify how health, illness and disease are distributed across human populations and how environmental, socio-economic, demographic, biological, behavioural and political factors influence individual and population health.

HSCI 140-3 Complementary and Alternative Medicine
A scientific, critical, and evidence-based examination of integrative, complementary, and alternative approaches to health. Why so many people are skeptical of conventional medicine and contemporary treatment modalities. Integration of traditional medicines into mainstream medicine. The need to investigate, and to protect the public from fraud. The extent to which both complementary and mainstream medicine can withstand the scrutiny of an evidence-based approach.

HSCI 150-3 Current Topics in Human Sexuality
Current issues and controversies and their impact on the sexual behaviour and well-being of individuals at different ages and circumstances. Typical topics might include sexually transmitted diseases and AIDS, sexual orientation and cultural differences in tolerance, abuses of power, and sexually explicit media. Differing perspectives and a diversity of views will be presented in a non-prescriptive manner. As a result, many of the opinions expressed in this course will be controversial.

HSCI 160-3 Global Perspectives on Health
An introduction to the differences in health and health services among the nations of the globe. Vulnerable sub-populations worldwide and their special health needs. Mechanisms whereby events in one country can impact health in another. Future worldwide health risks, their economic and health consequences. SARS, avian flu, West Nile virus, 'mad cow disease,' antibiotic resistant malaria or tuberculosis. Dangers to rich and poor nations from ignoring health problems in developing world.

HSCI 199-3 Special Topics in Health Sciences
A specific topic in health sciences which is not otherwise covered in-depth in regular courses.

HSCI 211-4 Perspectives on Cancer, Cardiovascular, and Metabolic Diseases
An interdisciplinary overview of the major non-communicable diseases - cancers, cardiovascular and metabolic diseases - from a public health perspective. Review of biological mechanisms, risk factors, historical and cultural contexts, and global distribution. Prerequisite: HSCI 100 or BISC 101, HSCI 130.

HSCI 214-4 Perspectives on Infectious and Immunological Diseases
An integrated survey of infectious diseases and their social and economic causes and consequences. Infectious agents, including bacteria, protozoa, fungi and viruses? how they spread, how they work, and how they can be stopped. Surveillance, prevention, and management of infectious diseases and epidemics. Prerequisite: HSCI 100 or BISC 101, HSCI 130.

HSCI 215-4 Perspectives on Disability and Injury
An interdisciplinary overview of disability and injury. Review of global distribution and risk factors. Examination of disability and injury across multiple levels of analysis. Prerequisite: HSCI 100 or BISC 101, HSCI 130.

HSCI 301-3 Foundations of Health Promotion and Health Communication
The role of health communication and education in the improvement of health and mitigation of disease. Strategies and methodology for public education regarding health maintenance, and preventive measures. New approaches in health promotion - legislation and the use of print media and web technology in health communication. Prerequisite: One prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 302-3 Evidence-based Decision Making in Health
Decision making based on proven data. Effective criteria for rigorously evaluating health information and practices. Evaluation of health decisions influenced by political, commercial, or cultural factors. Prerequisite: HSCI 210, 211, 212, 213.

HSCI 303-3 Perspectives on Behavioural Risks
An interdisciplinary overview from a public health perspective of behaviours and conditions associated with leading causes of morbidity and mortality. Prerequisite: one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 304-3 Perspectives on Environmental Health
Environmental risks and the impact of human activity on health. Chemical and biological hazards. Methodological approaches to their detection, assessment, management, and mitigation. Prerequisite: one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 305-3 The Canadian Health System
A comparative analysis of the Canadian health care and delivery systems. Organizational principles, health resources, access to care, service utilization, health care planning, and health promotion strategies. Societal and political issues that affect the Canadian health care system.
COURSES

404 Course Catalogue – Health Sciences HSCI

HSCI 306-3 Principles of Health Economics
A study of micro- and macro-economic concepts used in the pursuit of better health and health care. Choice within limited resources, economic evaluation of efficiency, equity, elasticity of health systems, policy and regulatory issues. Prerequisite: one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 307-3 Research Methods in Health Sciences
Principles and applications in the contemporary research methodology in health sciences - strengths and weaknesses, successes and failures. Includes research methods associated with systematic health assessment and health planning. Prerequisite: one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 319-3 Applied Health Ethics
Practical ethical and legal issues in health sciences, emphasizing population and public health. Case studies approach highlighting current ethical dilemmas and decision-making in the context of local to global legal frameworks. Prerequisite: 30 credit hours of completed course work. HSCI 319 is identical to PHIL 319 and students cannot receive credit for both courses.

HSCI 320-3 Health Technology – Laboratory Methods
An integrated study of contemporary laboratory and investigative methodologies in use in health assessment, indications, and misuse of chemical, immunological, microbiological and molecular biological tests. Scientific and financial criteria for usefulness in screening for disease and risk factors. Prerequisite: HSCI 210, 211, 212, 213.

HSCI 321-3 Health Technology – Imaging
The investigative use of radiological and other medical imaging techniques, and their use and misuse. Description, indications, and misuse of X-ray, CT, MRI, PET, ultrasonic and newly emerging techniques. Scientific and economic criteria of usefulness in screening for disease and risk factors. Prerequisite: HSCI 210, 211, 212, 213.

HSCI 322-4 Introduction to Pathophysiology
A review of pathophysiological mechanisms with an emphasis on the molecular, cellular and genetic bases of pathology. Laboratory includes historical preparations, and microscopic examination of normal and diseased tissues. Prerequisite: MBB 222, three HSCI 200-level courses.

HSCI 323-3 Principles of Pharmacology and Toxicology
Biological, molecular and biochemical actions of drugs and toxicants. Genetic and environmental risk determinants. Understanding the broad spectrum of toxicological problems encountered in clinical practice, drug development and regulation, and medical research. Prerequisite: MBB 222, CHEM 282, three HSCI 200-level courses.

HSCI 324-3 Human Population Genetics and Evolution
Human variation and human health in the context of population genetics, epidemiology, demography, and human evolution. Prerequisite: MBB 222 and one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 325-3 The Immune System I: Basis of Innate and Adaptive Immunity
The basic organization of the immune system, including structure, function and genetics of antibodies, T-cell receptors, innate immune receptors, and the complement system. Development of cells involved in both innate and adaptive immune responses. Prerequisite: MBB 222 and one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 330-3 Exploratory Strategies in Epidemiology
The concepts and measurements of human population dynamics in epidemiological inference. Identification of causes and prevalence of disease. Demographic and molecular methodology to assess the determinants of health and disease. Prerequisite: HSCI 302, STAT 302 and one prerequisite from HSCI 211, 212, 214, 215 and one corequisite from HSCI 211, 212, 214, 215.

HSCI 340-3 Social Determinants of Health

HSCI 350-3 Co-op Practicum I
First semester of work experience in the Health Sciences Co-operative Education Program. Credits from this course do not count towards the credit required for an SFU degree. Work terms are graded as Pass/Fail. Prerequisite: Students must be accepted into the Health Sciences Co-op program and complete Bridging Online.

HSCI 351-3 Co-op Practicum II
Second semester of work experience in the Health Sciences Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Work terms are graded as Pass/Fail. Prerequisite: Completion of HSCI 350 Co-op Practicum I.

HSCI 399-3 Special Topics in Health Sciences II
A specific topic in health sciences which is not otherwise covered in depth in regular courses. Prerequisite/Corequisite: will vary according to topic.

HSCI 401-3 Behavior Modification in Health Promotion
Behavior modification strategies and their applications in risk reduction, health promotion, and disease prevention. New approaches in behavior modification: new media and new technology. Prerequisite: HSCI 302.

HSCI 420-4 Computers in Health and Health Information Systems
A broad study of computational tools for all aspects of the field of health. Topics include health information systems, databases, GIS, as well as the acquisition and management of molecular data in health risk assessment and mitigation. Prerequisite: HSCI 301.

HSCI 421-4 Health Survey Methods
The utility of surveys in health research and practice. Strategies for design, administration, and analysis of data from qualitative and quantitative health surveys. Practical tools for exploratory analysis. Problems and limitations, and how to avoid them. Prerequisite: HSCI 330, SA 355, 356.

HSCI 422-4 Diffusion Pathways in the Spread of Disease
The dynamics of disease distribution processes, and the mechanisms and pathways by which diseases spread. Representation and analysis by computational and cartographic methods. Prerequisite: HSCI 330.

HSCI 423-3 Health Policy in Disease Mitigation and Public Health
An overview of the tools of policy analysis as the means of shaping health care policy and the health of the public. The application of philosophical, political, and economic concepts to health policy debates and the improvement of health care delivery. Prerequisite: HSCI 305, 306.

HSCI 424-4 Strategic Applications of GIS in Health

HSCI 425-3 The Immune System II: Adaptive Immunology and Health Disease
The immunologic response to bacterial, viral and parasitic infections, immunological diseases, such as autoimmune disease, immunodeficiency and transplantation-rejection reactions. Immunotherapeutics and vaccine development. Prerequisite: HSCI 325.

HSCI 430-3 Health Problems of Vulnerable Populations
A study of the relationships between socioeconomic conditions and health in vulnerable populations. Impact of living conditions and access to health services on health risks, mortality, and morbidity, and strategies for better outcomes in disadvantaged communities. Prerequisite: HSCI 301, 302.

HSCI 431-3 The Global HIV/AIDS Epidemic
A multidisciplinary and international focus on the transmission, impact, prevention, and human aspects of the global HIV/AIDS epidemic. Prerequisite: HSCI 212, 330.

HSCI 432-3 Infectious Disease Epidemiology
Tools for the surveillance, prevention, and control of infectious diseases and their application in public health programs. Prerequisite: four HSCI 200-level courses, HSCI 330.

HSCI 441-4 Virology Laboratory
Study, in a laboratory environment, of viruses as infectious agents that threaten human health and viral associated cancer as well as their use in gene therapy. Includes cell culture methods, virus isolation and quantification, virus purification, etc. Prerequisite: BISC 303, MBB 308, HSCI 323.

HSCI 442-4 Immunology Laboratory
Study, in a laboratory environment, of the molecular and cellular basis of the immune system. Immunology overlaps with many other biological disciplines including biochemistry, molecular biology, cell biology, genetics, physiology, microbiology and relies on laboratory methods and concepts derived from these disciplines. Prerequisite: HSCI 325. Corequisite (recommended): HSCI 425.

HSCI 443-4 Environmental Health Toxicology Laboratory
The scientific principles underlying the toxic actions of various substances important to human health. The chemical nature of toxic substances, their mode of action, uptake and metabolism. Analytical techniques for analyzing samples of toxicological importance in the work and general environment and short-term assays used in risk assessment will be introduced. Prerequisite: BISC 313.

HSCI 450-3 Co-op Practicum III
Third semester of work experience in the Health Sciences Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Work terms are graded as Pass/Fail. Prerequisite: Completion of HSCI 351 Co-op Practicum II.

HSCI 451-3 Co-op Practicum IV
Fourth semester of work experience in the Health Sciences Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Work terms are graded as Pass/Fail. Prerequisite: Completion of HSCI 450 Co-op Practicum III.
HSCI 452-3 Co-op Practicum V
Fifth semester of work experience in the Health Sciences Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Work terms are graded as Pass/Fail. Prerequisite: Completion of HSCI 451 Co-op Practicum IV.

HSCI 471-3 Special Topics in Health Sciences I
Selected topics in areas not currently offered within the undergraduate course offerings. Prerequisite: will vary according to topic.

HSCI 472-3 Special Topics in Health Sciences II
Selected topics in areas not currently offered within the undergraduate course offerings. Prerequisite: will vary according to topic.

HSCI 473-3 Special Topics in Health Sciences III
Selected topics in areas not currently offered within the undergraduate course offerings. Prerequisite: will vary according to topic.

HSCI 481-3 Senior Seminar in Social Health Science
An in-depth overview of the sociocultural, epidemiological, and policy aspects of population and public health. Prerequisite: two courses from List A.

HSCI 482-3 Senior Seminar in Infectious Diseases
An in-depth overview of newly emerging and re-emerging infectious diseases in the context of disease prevention, surveillance and control. Prerequisite: two courses from List B.

HSCI 483-3 Senior Seminar in Environmental Health
An in-depth overview of environmental health, environmental risks and human activity in relation to environmental health in the context of disease prevention, surveillance and control. Prerequisite: two courses from List C.

HSCI 488-3 Directed Studies in Health Sciences
Independent studies on topics selected in consultation with the supervising instructor. A student will be permitted to enroll in this course only if she or he obtains the prior written agreement of a professor who will act as research supervisor.

HSCI 489-3 Directed Research in Health Sciences
Independent research on topics selected in consultation with the supervising instructor. A student will be permitted to enroll in this course only if she or he obtains the prior written agreement of a professor who will act as research supervisor.

HSCI 490-5 Research Proposal
Research proposal for the honors thesis. HSCI 490, 491 and 492 together form the honors thesis. Limited to honors students upon written agreement of the faculty supervisor.

HSCI 491-5 Independent Research
Research proposal for the honors thesis. HSCI 490, 491 and 492 together form the honors thesis. Limited to honors students upon written agreement of the faculty supervisor. Prerequisite/corequisite: HSCI 490.

HSCI 492-5 Honors Research Thesis
Independent honors research thesis. HSCI 490, 491 and 492 together form the honors thesis. Limited to honors students upon written agreement of the faculty supervisor. Prerequisite or corequisite: HSCI 491.

HSCI 493-3 Special Topics in Health Sciences III
A specific topic in health sciences which is not otherwise covered in depth in regular courses. Prerequisite/Corequisite: will vary according to topic.

HSCI 691-0 Seminars in Population and Public Health
Required of all graduate students in Health Sciences, each semester except summer semesters. Presentations will be given by faculty, students, and visiting scholars followed by seminar discussions. Graded satisfactory/unsatisfactory. Corequisite: Students must be registered in at least one other course. HSCI 898 and PPB 898 may fulfill this requirement.

HSCI 801-4 Biostatistics I

HSCI 802-4 Principles of Epidemiology for Public Health
The underlying concepts and methods of epidemiology in the context of population and public health. Study designs (clinical trials, cohort studies, case-control studies, and cross-sectional), measures of disease frequency and effect, validity and precision, confounding and effect modification, analysis of two-by-two tables, and options for control. Students will acquire skills in the critical interpretation of the epidemiologic literature, methodology of estimating measures of disease frequency and effect and common measures of potential impact; evaluation of study design; analysis of bias and confounding; and options for control of extraneous factors. HSCI 801 may be taken concurrently.

HSCI 803-5 Research Methodology for the Health Sciences
Methodologies and strategic research design for advances in knowledge and understanding in the health sciences. Problem definition, critical evaluation of literature, proposal writing, and ethical issues are explored. Provides experiential and intellectual grounding in aspects of qualitative inquiry and selected quantitative issues. Includes sampling, data collection, and analysis.

HSCI 890-4 Special Topics in Health Sciences
Special topics in areas not currently covered within the graduate program offerings. Prerequisite: depending on the special topic offered.

HSCI 891-3 Special Topics in Health Sciences
Special topics in areas not currently covered within the graduate program offerings. Prerequisite will depend on the special topic offered.

HSCI 892-2 Special Topics in Health Sciences
Special topics in areas not currently covered within the graduate program offerings. Prerequisite will depend on the special topic offered.

HSCI 893-3 Directed Studies in Health Sciences
HSCI 894-4 Directed Studies in Health Sciences
HSCI 896-6 MSc Thesis
MSc Thesis

History HIST
Faculty of Arts and Social Sciences
HIST 101-3 Canada to Confederation

HIST 102W-3 Canada since Confederation
A survey of Canadian history since 1867. Writing/Breadth-Humanities.

HIST 104-3 The Americas from Colonization to Independence
A comparative exploration of the colonization of North and South America by the various European empires together with the role of Native and African peoples in the Americas, from the late fifteenth century to the onset of political independence three hundred years later. Breadth-Humanities.

HIST 106-3 The Making of Modern Europe
An introduction to the major political, social, economic, cultural, and intellectual developments that have formed modern European society. Breadth-Humanities.

HIST 130-3 Modern World History
A survey of the history of the world from circa 1405 to the present, with a focus on global historical phenomena. Topics may include political, economic, cultural, and environmental aspects of globalization, religious and scientific revolutions, industrialization, nationalism, decolonization, and the evolution of modernity. Breadth-Humanities.

HIST 146-3 Africa after the Transatlantic Slave Trade
An introductory survey of colonization, of social, political and environmental change under colonial rule, and of the stormy history of state-society relations in Africa since independence. Breadth-Humanities.

HIST 151-3 The Modern Middle East
An introductory survey of the changing societies of the Middle East since 1800. Emphasis will be placed on familiarizing students with the basic aspects of Islamic society, the influence of European imperialism, the modernization of traditional societies, the origins of the Arab-Israeli conflict, and the social and political ferment in the period since the Second World War. Breadth-Humanities.

HIST 201-3 The History of Western Canada
A history of the prairies and British Columbia dealing with the aboriginal cultures, the fur trade, the evolution of transportation and links with metropolitan areas, settlement and economic development, political evolution, evolving rural and urban systems, and intellectual and cultural identities.

HIST 204-3 The Social History of Canada
A survey of major themes in Canadian social history from the arrival of Europeans to the present day. Particular attention will be paid to the effects of gender, race and class on the experience of Canadians over time. Recommended: HIST 101 and 102. Breadth-Humanities.

HIST 205-3 Premodern Japan
A survey of Japanese history from antiquity until the late nineteenth century or early modern period. Prerequisite: students with credit for HIST 206 offered prior to 2002-2 cannot take this course for further credit. Breadth-Humanities.

HIST 206-3 Modern Japan
A survey of Japanese history from 1868 until 1952 which will examine, among other topics, the establishment of the Japanese colonial empire, the wars with Russia, China and the United States, and the post-war Allied Occupation. Recommended: HIST 205. Breadth-Humanities.

HIST 208-3 Latin America: the Colonial Period
A study of the process and institutions of Spanish colonial administration with emphasis on the clash of European and Amerindian cultures. Recommended: HIST 104. Breadth-Humanities.

HIST 209-3 Latin America: the National Period
A survey of Latin American history from Independence (1808-24) to the present:
post-Independence political collapse and reconstitution; Latin America in the world trade system and the changing conditions of economic dependency; nationalist reform (Mexico) and socialist revolution (Venezuela), liberalism, populism, and the rise of modernizing military. Treatment by topics and broad historical period rather than country by country. Recommended: HIST 208. Breadth-Humanities.

HIST 212-3 The United States to 1877
The emergence and development of American civilization from post-Civil War to modern forms. Topics to be discussed will include industrialization, urbanization, foreign policy, and political institutions. Recommended: HIST 104. Breadth-Humanities.

HIST 213-3 The United States Since 1877
An analysis of the transformation of American culture from post-Civil War to modern forms. Topics to be discussed will include industrialization, urbanization, foreign policy, and political institutions. Recommended: HIST 212. Breadth-Humanities.

HIST 215-3 The Making of the British Isles
A broad survey of some of the central developments that have shaped the history of the British Isles from Roman antiquity to the present. Breadth-Humanities.

HIST 220-3 Late Medieval and Renaissance Europe
An introduction to the world of late Medieval and Renaissance Europe (c.1200-c.1500). Breadth-Humanities.

HIST 223-3 Early Modern Europe, 1500-1789
A survey of early modern European history which will examine, among other topics, the wars of religion, the 17th century revolutions, 16th and 17th century economic development, the scientific revolution, the enlightenment and the political and social character of the old regime. Breadth-Humanities.

HIST 224-3 Europe from the French Revolution to the First World War
A survey of European history emphasizing the French Revolution, and Napoleonic Europe and first Industrial Revolution, liberalism and its opponents, agrarian conservatism, liberalism and conservatism, the Revolutions of 1848, the struggles for political unification, the second Industrial Revolution and the origins of the First World War. Breadth-Humanities.

HIST 225-3 20th Century Europe
A survey of European history from the First World War emphasizing the origins and effects of the World Wars, the emergence of the Soviet Union and of fascism. Breadth-Humanities.

HIST 231-3 History of Africa to the 19th Century: From Ancient Times to the Slave Trade
A general, introductory survey of Africa’s rich pre-colonial past, its vibrant cultures and sophisticated trading systems, the rise of trading and commercial and political networks, and dynamic (and internally differentiated) social systems. Also discusses the trans-Atlantic trade in African slaves and the arrival of Europeans on African shores.

HIST 249-3 Classical Islamic Civilization
This course is a broad survey of the development of classical Islamic civilization. It begins with an examination of the origins of Islam in seventh century Arabia and concludes with the breakdown of the Abbasid Caliphate of Baghdad in the 13th century. Emphasis will be placed on gaining an understanding of the doctrines of Islam, the significance of the rise and fall of the early Arab-Islamic empires, and the role of Islam in world history. Breadth-Humanities.

HIST 252-3 Islamic India
A survey of the cultural patterns, social and political forces, and historical context of Islamic India. Special attention will be directed toward the Mughal empire and its decline. Breadth-Humanities.

HIST 254-3 China to 1800
This course offers a broad survey of the history of China from antiquity to the eve of its modern transformations at the turn of the nineteenth century. It aims to challenge the perception of an unchanging China and to encourage students to develop a critical understanding of the forces integrating and dividing this geo-cultural unit. Breadth-Humanities.

HIST 255-3 China since 1800
A survey of the history of China from the end of the eighteenth century, when traditional Chinese society was arguably at its height of development, to the end of the twentieth century when the social revolutions promised by the Communist regime have clearly failed to materialize. The main objectives are to provide students with vocabularies and tools to understand and interpret the political, social and cultural transformations in modern China and to initiate them in the art and techniques of historical analysis. Breadth-Humanities.

HIST 256-3 The People’s Republic of China
An introduction to the politics, society, and economy of mainland China from the aftermath of the Sino-Japanese war to the rapid social, political, and economic changes of the last two decades.

HIST 288-3 History of Christianity to 1500
A survey of the history of Christianity from its origins to 1500. Breadth-Humanities.

HIST 299-3 Problems in History
This course is designed to allow students to pursue in greater depth a particular historical problem. It will be offered either as an individual reading course or in small seminars, depending upon student and faculty interest. Admission only by prior consent of instructor. Students may not take this course more than once or after they have completed 60 hours of course work. Recommended: at least four university level courses in history.

HIST 300-4 Approaches to History
An examination of the conceptual problems involved in the historian’s attempt to apprehend the past and its relationship to the present and future. Particular attention will be paid to the nature of historical knowledge and explanation, and to the broad systems and patterns in which history has been conceived. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 305-4 Honors Seminar
Open only to honors students. An introduction to the honors program followed by detailed study of various philosophies and methodologies of historical writing. Prerequisite: 45 credit hours including 9 hours of lower division history credit; admission to the honors program in history.

HIST 307-4 Selected Topics in Historical Studies
Selected Topics. Prerequisite: 45 credit hours including 9 hours of lower division History credit.

HIST 308-4 The Byzantine Empire
Examines the earlier half of the Roman Empire, which survived, by twelve hundred years, the collapse of the Western empire in the fifth century AD, and its transformation by Greek culture, language, political traditions and religion. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 315-4 Politics and Society in England, 1500-1707
This course provides a general overview of the social and political history of Tudor and Stuart England. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 316-4 English Society since the Mid 18th Century
A study of English society, culture and politics from the accession of George III to the present. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 319-4 The Modern French Nation
An examination of the history of modern France from 1789 to the present with a focus on the social, political, and cultural divisions within the French nation resulting from the Revolutionary era, industrialization, the expansion and eventual decolonization of France’s colonial empire, and the World Wars and their consequences. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 320-4 European Reformation
An advanced examination of the complex history and patterns of the Religious Reformation in sixteenth century Europe. Emphasis will be placed on the religious thought of the period, and on its social and political context. Prerequisite: 45 credit hours including nine hours of lower division History credit. Strongly recommended: HIST 220 or 223. Students who have taken HIST 403-4 prior to 2005-3 cannot take this course for further credit.

HIST 321-4 State and Society in Early Modern Europe
Examines major themes and developments in the political and social history of early modern Europe (1500-1789); will consider various forces (e.g. religious, cultural, economic, military) that contributed to or challenged the strengthening of state power. While the focus of the course will usually be comparative in nature, it may on occasion also emphasize one particular state. Prerequisite: 45 credit hours, including 9 hours of lower division History credit. Students who have taken HIST 318 or HIST 331 prior to 2005-3 may not take HIST 321 for further credit.

HIST 322-4 Atlantic and Pacific Migration
Topics in the history of Atlantic and Pacific migrations to the Americas with attention given to the contexts from which the migrants came, why they migrated, and how they adjusted. Examples may be taken from the United States, Canada and Latin America. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 325-4 History of Aboriginal Peoples of North America Since 1850
This course examines selected themes in the history of Aboriginal peoples of North America from first contact with Europeans to the mid-nineteenth century. Contact along a range of colonial frontiers including British, French, Spanish and Russian will be considered. Topics include the fur trade, disease, missionaries, intermarriage, and imperial politics. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 326-4 History of Aboriginal Peoples of North America Before 1850
An examination of selected themes in the history of Aboriginal peoples of North America in the nineteenth and twentieth centuries. Topics include the fur trade, missionaries, intermarriage, the Metis, government policies, wage labour, education, treaty making, oral narratives and political activism. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 327-4 Canadian Labor and Working Class History
An examination of the history of labor, primarily in English Canada, during the 19th and 20th centuries. The evolution of trade unions and labor-political movements will be examined together with the impact of industrialization, the rise of mass production, changing patterns of employment and other contexts of working-class culture and material life. Special attention will be paid to British Columbia as a case study. Historically the course examines ‘working class
HIST 328-4 The Making of Imperial Russia
An examination of major themes in Russian history up to the Revolution of 1917, including the emergence of the modern Russian state; the organization of the empire at the center and the periphery; the contest between imperial, national, and religious identities; social, economic, and cultural transformations; and the Russian Empire's involvement in world politics. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 105 and 106.

HIST 334-4 The Soviet Project
An examination of the history of the Soviet Union from its creation to its collapse, emphasizing its ideology, culture, role in global politics, and social and economic transformations. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 223 or 224.

HIST 337-4 The Balance of Power in Europe
An examination of the shift of power among competing European states from the late 19th century until the mid-20th century. Attention will be given to the origins and consequences of the two great European wars and to the policies of Britain, France, Germany, and Russia which brought about the significant changes in the balances of power. Study will be based primarily upon documents from the Chanceries. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 225.

HIST 338-4 World War II
An introduction to the history of the origins and course of the second world war. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 225.

HIST 339-4 The British Empire and Commonwealth
This course provides an outline history of the British Empire, its rise and decline, and discusses the origin and significance of the Commonwealth. In addition there is a detailed account of the ‘Westminster Model’ of parliamentary democracy, on which the political institutions of many Commonwealth nations are based. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: HIST 101.

HIST 343-4 Africa and the Slave Trade
An examination of the trade in slaves from Africa and the rise of slavery within that continent. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Students with credit for HIST 478 may not enroll in HIST 343. Recommended: HIST 146 or 231.

HIST 344-4 East Africa
A regional study from the Arab and European penetration in the 19th century to the emergence of Kenya, Uganda, and Tanzania as independent states with emphasis on the patterns of economic, political, social and religious change. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 345 for further credit if duplicating content of another history course and vice versa. Writing.

HIST 348-4 A History of Twentieth Century South Africa
An examination of the economic, social and political history of 20th century South Africa. Particular attention will be paid to the factors which led to the rise of apartheid. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: at least one of HIST 146, 231.

HIST 350-4 The Ottoman Empire and Turkey
A study of the Ottoman society and the impact of Ottoman rule in the Middle East from the conquest of Constantinople to the death of Ataturk, the founder of the Turkish Republic. Emphasis will be on the conflict between preservation and reform in the nineteenth century and on the significance of the Ottoman legacy for twentieth century Turkey and the Arab world. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: one of HIST 151, 249, 251.

HIST 352-4 Religion and Politics in Modern Iran
An examination of selected topics in the history of Iran from the Safavids to the twentieth century. Emphasis will be on the relationship between religion and politics. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: one of HIST 151, 249, 251.

HIST 355-4 The Arab Middle East in the Twentieth Century
An examination of this century's major themes in the history of Syria, Lebanon, Iraq, Jordan and Saudi Arabia, as well as other states of the Arabian peninsula. Topics to be investigated include the origins of Arab nationalism and Islamic reformism; the origins and development of the Lebanese question; the emergence of the politics of the military in Iraq and Syria, and the special role of the Jordanian and Arabian monarchies. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: one of HIST 151, 249, 251.

HIST 356-4 Ireland from the Penal Era to Partition
Examines key social, economic, political, and intellectual developments in Ireland from the 18th to the mid-20th centuries. It will also explore shifting understandings of the Irish "nation" and consider how communal historical memory can be appropriated to serve different political agendas. Prerequisite: 45 credit hours, including nine credit hours of lower division history. Students who have taken HIST 390 D200 in spring semester 2006 (1061) may not take this course for further credit.

HIST 364-4 Social History of China since 1800
A survey of Chinese society from circa 1800 to the early twentieth century. The course begins with an introduction to Chinese society in the mid-Qing period and then moves on to discuss intellectual, social, cultural, and political changes that are often associated with the "impact of the West." Prerequisite: 45 credit hours including 9 hours of lower division History credit including HIST 255.

HIST 366W-4 Selected Topics in the History of the Wider World
A writing-intensive examination of selected topics in the history of Asia, Africa and/or the Middle East. The content will vary from offering to offering. See department for further information. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Students may not take selected topics within HIST 368 for further credit if duplicating content of another history course and vice versa. Writing.

HIST 370-3 Practicum I
This is the first semester of work experience in co-operative education. It is meant to be exploratory in nature. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 60 semester hours with a minimum CGPA of 2.75. Students should apply to the co-op co-ordinator one semester in advance.

HIST 371-4 The Asia-Pacific War in Modern Japanese History
Covers the period in Japan from the 1930s to the 1950s and will introduce students to topics such as wartime atrocities, the dropping of the atomic bombs and the prosecution of war criminals. It will also attempt to explain why so much controversy surrounds interpretations of events arising from Japan's last war, the Asia-Pacific War. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: at least one course on modern Japan.

HIST 373-4 Conquest in North America, 1500-1900
A broad examination of attempts by aboriginal, imperial, and mercantile forces to claim and control
the North American continent from the arrival of Spanish conquistadors in the early 1500s to the surrender of Geronimo in 1886. Explores the processes of colonization from many perspectives, including Aboriginal, American, English, French, Russian, and Spanish ambitions and activities. Prerequisite: 45 credit hours including nine hours of lower division History credit and one of HIST 101 or 212, or permission of the department. Breadth: Humanities.

HIST 374W-4 Selected Topics in the History of the Americas
A writing-intensive examination of selected topics in the history of the Americas. The content will vary from offering to offering. See department for further information. Prerequisite: 45 credit hours including nine hours of lower division History credit. Students may not take selected topics within HIST 374 for further credit if duplicating content of another history course and vice versa. Writing.

HIST 375-3 Practicum II
This is the second semester of the Co-operative Education Program. Building on the experience of the first employment semester, this semester will provide a work experience that integrates and builds on the research and writing skills associated with the discipline. Examples from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 75 semester hours (including HIST 370) with a minimum CGPA of 2.75. Students should apply to the co-op co-ordinator one semester in advance.

HIST 376-4 North American West
Examines themes in the development of the western portions of North America, their incorporation into nation states, and the tensions between local, regional, and national systems during the last two centuries. Themes will include race, ethnicity, class labor, colonialism, and capitalist development. Field Trip to Gulf of Georgia Cannery National Historical Site of Canada. Prerequisite: 45 credit hours including 9 hours of lower division history credit. Students with credit for HIST 391 in 1057 may not take this course for further credit.

HIST 377-4 Environmental History
Examines the reciprocal influences between humans and nature through time. Topics may include settlement, agriculture, technology, politics, urbanization, science, and conservation. Prerequisite: 45 credit hours including 9 hours of lower division History credit. The course is identical to GEOG 377 and students cannot take both courses for credit.

HIST 378-4 The United States in the World since 1865
Examines how the United States has influenced the world (and vice versa) from the American Civil War to the 21st century. Themes will include race, ethnicity, class and capitalism, and the rise of the global economy. Prerequisite: 45 credit hours including nine hours of lower division History credit. Students who have taken HIST 390 in 1051 may not take this course for further credit.

HIST 379-4 Christianity and Globalization
An examination of select topics in Christianity and globalization, with an emphasis on the early-modern period. Students will explore the connections between regions rather than regional histories. Prerequisite: 45 credit hours, including nine hours of lower division History credit.

HIST 380-4 Studies in History I
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 381-4 Studies in History II
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 382-4 African-American History, since 1865
Examines black history from the end of the American Civil War to the 21st century. Themes will include race, ethnicity, class and capitalism, and the rise of the global economy. Prerequisite: 45 credit hours including nine hours of lower division History credit. Students who have taken HIST 390 in 1051 may not take this course for further credit.

HIST 383-4 The United States in the World, since 1865
Examines how the United States has influenced the world (and vice versa) from the American Civil War to the 21st century. Themes will include race, ethnicity, class and capitalism, and the rise of the global economy. Prerequisite: 45 credit hours including nine hours of lower division History credit. Students who have taken HIST 390 in 1051 may not take this course for further credit.

HIST 384-4 Christianity and Globalization
An examination of select topics in Christianity and globalization, with an emphasis on the early-modern period. Students will explore the connections between regions rather than regional histories. Prerequisite: 45 credit hours, including nine hours of lower division History credit.

HIST 385-4 Studies in History I
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 386-4 Studies in History II
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.
HIST 422-4 Greece, 1935-1944: Occupation and Resistance
Examines the cycle of violence that followed the Axis occupation of Greece and created a political schism that lasted until the 1980s. The course will focus on Greek resistance, foreign relations and relations with the British intelligence services. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 424-4 Problems in the Cultural History of Canada
Selected problems in Canadian ideas and attitudes on such topics as the arts, religion, education, minority and native cultures, nationalism, and Canadian historiography. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 101, 102.

HIST 425-4 Gender and History
Explores historical changes in masculinity and femininity. Using a thematic and transnational/comparative approach, it will examine how gender identities are formed and refashioned within different historical contexts. It will also explore the interaction between gender and other systems of power such as race, class, and ethnicity. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 426-4 State Power and Social Regulation in North America
An examination of the growth and evolution of the relationship between state and society in North America. It will examine the myriad direct and indirect ways in which the state has regulated the lives of North Americans and the equally diverse ways in which North Americans have sought to influence and shape state policy. Prerequisite: 45 credit hours including nine hours of lower division history. Recommended: PHIL 120 or 220.

HIST 427-4 Problems in the History of Aboriginal Peoples
Examination of selected themes in the history of Aboriginal peoples. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 428-4 Problems in the Social and Economic History of Canada
Selected topics in the history of Canadian agriculture and industrial development, migration and settlement, labor, native policy and class structure. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 101, 102.

HIST 430-4 New France
Social, cultural, intellectual, economic, military, and administrative aspects of New France. Prerequisite: HIST 101 plus 45 credit hours including nine hours of lower division history credit. Recommended: HIST 102.

HIST 432-4 Problems in Environmental History
An investigation into the major themes and arguments in the environmental histories of North America, emphasizing how different individuals and groups have used, perceived, and managed their environment over time. Prerequisite: 45 credit hours including nine hours of lower division history credit. This course is identical to GEOG 432 and students cannot take both courses for credit.

HIST 436-4 British Columbia
Selected problems in the social, cultural, economic and political development of British Columbia. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 101 and 102.

HIST 439-4 Catholicism in Early Modern Europe
An examination of the complex history of Catholicism in Europe in the period 1500-1689. By elucidating the diversity within and among institutions and religious experiences, it will challenge the traditional assumption that Catholicism constituted a religious monolith impervious to historical change. Subjects for particular focus may include the historiographical approaches to Catholicism, the papacy, the Society of Jesus, popular religion, the role of art. Prerequisite: 45 credit hours including nine hours of lower division History credit and one of HIST 220, 223 or 320.

HIST 442-4 America's Empires
Explores the various empires (Indigenous, Spanish, French, Dutch, British) that sought dominance in North America after 1500, and discusses the usefulness of 'empires' as a way of thinking about history and power. Prerequisite: 45 credit hours including nine hours of lower division History credit. Recommended: at least one of HIST 208, 209, 212, 213, and 223. Students with credit for HIST 487 in 1047 may not take this course for further credit.

HIST 444-4 Conceptualizing Atlantic Canada
Explores the social, political, economic, cultural, and intellectual environments in which the region of 'Atlantic Canada' has been created and re-imagined over time. Prerequisite: 45 credit hours, including nine credit hours of lower division history. Recommended: HIST 101 or 102. Students who have taken HIST 485 D100 in fall semester 2008 (1067) may not take HIST 444 for further credit.

HIST 446-4 American Revolution and the Making of the Constitution
Selected topics may include the Revolutionary War Era; the American Enlightenment; the New Nation; American Diplomacy in the Formative Period. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 212.

HIST 450-4 Race, Expansion and War in the Early American Republic
Explores the awkward relationship between racial diversity and territorial expansion in the early American republic, and examines the political, social, economic and cultural elements that contributed to the American Civil War. Prerequisite: 45 credit hours including nine hours of lower division history credit. Students with credit for HIST 447 under the same topic may not take HIST 450 for further credit. Recommended: HIST 212.

HIST 454-4 The History of Sexuality
Explores how ideas, practices and identities have changed over time in response to social, political and economic pressures. Emphasis will be on postmodern approaches to understanding sexuality, and the international historical scholarship it has generated. Chronological and geographical focus of this course may vary. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 455-4 Race in the Americas
An examination of the role of racial thinking in the history of the Americas, from the era of the Conquest to the present day. Topics may include African and Indigenous slavery, the development of scientific racism in the 18th and 19th centuries, and the persistence of racism in the present day. Prerequisite: 45 credit hours, including nine hours of lower division History credit.

HIST 456-4 The Late Ottoman Empire: State, Culture and Social Transformation, 1750-1923
Focuses on major trends in the history of the Ottoman Empire from the mid-eighteenth century to its demise in the aftermath of World War I. Prerequisite: 45 credit hours including nine hours of lower division History credit. Recommended: HIST 151 and 249. Students who have taken HIST 486 D200 in 1061 may not take this course for further credit.

HIST 457-4 The Turkish Republic: Politics, Society, and Culture, 1918-Present
Examines the political, social, and cultural transformation in Turkey from the end of World War I to the present. Topics may include the Ottoman legacy in the Turkish Republic, issues of nation building, national identity and ethnicity, the role of the military in Turkish politics, changing concepts of gender, the role of political Islam, and Turkish diasporas. Prerequisite: 45 credit hours including nine hours of lower division History credit. Recommended: HIST 151 and 249. Students with credit in HIST 486 D100 in 1057 may not take this course for further credit.

HIST 458-4 Problems Latin American Regional History
Advanced concepts and methodology applied to the study of one or more Latin American regions. Examples are: pre-Columbian and colonial Middle America; revolutionary Mexico 1910-1970; Brazil from slavery to Militarism, frontier society to hyper-urbanism in the La Plata countries. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: one of HIST 104, 208, 209, LAS 200.

HIST 459-4 Problems in the Political and Social History of Latin America
Advanced concepts and methodology applied to the study of traditional and contemporary institutions (the church, the great estate, the peasantry, elite structures) and/or political movements (agrarian revolution, popularism, the modernizing military). Emphasis placed on changing historiographical interpretations. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: one of HIST 104, 208, 209, LAS 200.

HIST 462-4 Religion, Ethnicity, and Politics in Twentieth Century Northern Ireland
Explores the creation of Northern Ireland and the conflicting understandings of the past that led to discrimination and sectarian violence in the Twentieth Century. Prerequisite: 45 credit hours, including nine credit hours of lower division history. Recommended: HIST 362.

HIST 465-4 The Palestinian-Israeli Conflict
A discussion of the modern history of nation-building in the context of the Arab-Israeli conflict. The topics discussed include Zionism, the British Mandate in Palestine, the creation of the state of Israel, the rise of modern Palestinian nationalism, and the role of the Palestinian-Israeli dispute in regional and international affairs. Prerequisite: 45 credit hours including nine hours of lower division history credit and one of HIST 151, 249, 350, 354, 355 or permission of the department.

HIST 466-4 Religion and Society in Africa, Nineteenth and Twentieth Centuries
Explores the transition from the practice of indigenous religions to adherence to Christianity or Islam in Africa over the last two centuries. Examines through a series of case studies the growth of the world religions in Africa and the interaction of both with African religion. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 146. Students who have taken HIST 486 D100 in fall semester 2007 (1067) may not take HIST 466 for further credit.

HIST 467-4 Modern Egypt
An interpretive discussion of the course of modern Egyptian history. This may range from the advent to power of Muammar Al Gaddafi until recent times, or may focus on specific periods of revolutionary change. Prerequisite: 45 credit hours including 9 hours of lower division history credit and one of HIST 151, 249, 251, 350, 354, 355 or permission of the department.
HIST 473-4 The Making of South African Society
The history of South Africa. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 231, 348.

HIST 474-4 The Making of South African History
The history of South Africa. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 231, 348.

HIST 475-3 Practicum IV
This is the fourth semester of the Co-operative Education Program. The work experience will be focused in a specialized area of the student's choice. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 105 semester hours (including HIST 370 and 375) with a minimum CGPA of 2.75. Students should apply to the co-op co-ordinator one semester in advance. Students entering 400 division seminars should have an appropriate background in 100 and 200 division and/or 300 division History. Normally, students should have completed 45 credit hours (or the equivalent) prior to enrollment in any upper division history course.

HIST 471-4 Women in Modern Japanese History
The history of Japan from 1600 to the mid 20th century with a focus on the economic, social, cultural and political contributions of women. Prerequisite: 45 credit hours including nine hour of lower division history credit. Students with credit for HIST 485 in 2001-1 or HIST 488 in 2002-1 may not take this course for further credit.

HIST 472-4 Problems in World History
An advanced examination into the concepts and methodology of world history. Selected themes may include globalization, modernization, migration, religious expansion, colonialism, imperialism, and the teaching of world history. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 231, 348.

HIST 470-3 Practicum III
This is the third semester of the Co-operative Education Program. The work experience will be focused in a specialized area of the student's choice. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 90 semester hours (including HIST 370 and 375) with a minimum CGPA of 2.75. Students should apply to the co-op co-ordinator one semester in advance. Students entering 400 division seminars should have an appropriate background in 100 and 200 division and/or 300 division History. Normally, students should have completed 45 credit hours (or the equivalent) prior to enrollment in any upper division history course.

HUM 103-3 The Invention of the Book: Alphabets, Papyri, Parchment, and Print
The book as we know it did not always exist; it was invented. This course will explore the creation and spread of writing, the emergence of scribal cultures, and the birth of the book, which came to be the greatest of all material, cultural and intellectual objects, one that shaped and transformed civilization.

HIST 479-4 Change, Conflict and Resistance in Twentieth-Century China
Focuses on underprivileged and disenfranchised groups – farmers, workers, women, ethnic minorities, etc. – and on the mechanisms of inclusion and exclusion that structure modern Chinese society. Note that the seminar covers mainly continental China. Taiwan, Hong Kong, and the Chinese diaspora will be discussed only in passing. Prerequisite: 45 credit hours including nine hours of lower division History credit, including HIST 255 or 365, or permission of the department.

HIST 485-4 Studies in History I
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 486-4 Studies in History II
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 487-4 Studies in History
Allows students to pursue in greater depth a particular historical problem. It will be offered either as an individual reading course or as small seminars, depending upon student and faculty interest. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: at least three upper division courses in history.

HIST 490-4 Studies in History
Allows students to pursue in greater depth a particular historical problem. It will be offered either as an individual reading course or as a small seminars, depending upon student and faculty interest. Admission only by consent of instructor. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: at least three upper division courses in history.

HIST 491-4 Honors Essay
Written under the direction of an individual faculty member, the honors essay will reflect a familiarity with the events and literature of a particular area of study. Prerequisite: 45 credit hours including nine hours of lower division history credit. Students entering 400 division seminars should have an appropriate background in 100 and 200 division and/or 300 division history. Normally, students should have completed 45 credit hours (or the equivalent) prior to enrollment in any upper division history course.

HIST 805-5 Western Canada
HIST 806-5 Themes in Canadian History
HIST 810-5 Themes in European History
HIST 812-5 Special Topics in History
HIST 814-5 Research Seminar
HIST 815-5 Mediaeval Europe
This course will survey the range of historical literature produced between the end of antiquity and the beginning of the modern era. Beginning with the antique and patrician roots of medieval historiography, a number of sub-genres will be examined - biography, hagiography, chronicles and memoirs. The last section of the course will consider changes in historical perspective introduced by renaissance humanism.

HIST 820-5 Tudor and Stuart England
HIST 821-5 Early Modern Europe
HIST 822-5 Modern Great Britain
HIST 823-5 Modern Russia
HIST 824-5 Modern France
HIST 825-5 Modern Germany
HIST 826-5 International Relations
HIST 828-5 European Cultural and Intellectual History
HIST 843-5 United States to 1890
HIST 844-5 United States Since 1890
HIST 845-5 Latin America to 1825
HIST 846-5 Latin America Since 1825
HIST 851-5 State/Society in Pre-Modern Middle East
HIST 852-5 State and Society in the Modern Middle East
HIST 854-5 Imperialism in the Middle East
HIST 864-5 Tropical Africa
HIST 870-5 Culture and Society in China
HIST 871-5 Culture and Society in India
HIST 881-5 Great Britain as a Great Power Since 1763

HIST 885-5 Health and Society
HIST 886-5 Law and Society
HIST 887-5 Comparative Labor History
HIST 888-5 Native American Contact
HIST 890-5 Gender and History
HIST 891-5 The French Experience in North America
HIST 892-5 Religion and Society
HIST 893-5 State and Society
HIST 894-5 War and Society
HIST 895-5 Rural History
HIST 896-5 Culture and Identity
HIST 897-5 Supervised Readings
HIST 898-4 MA Thesis
HIST 899-6 PhD Thesis
HIST 900-6 Research Project

Humanities HUM
Faculty of Arts and Social Sciences
HUM 101W-3 Introduction to the Humanities
An introduction to issues and concepts central to the study of the Humanities. Through exposure to primary materials drawn from different periods and disciplines, students will become acquainted with a range of topics and ideas relating to the study of human values and human experience.

HUM 102W-3 Classical Mythology
An introduction to the central myths of the Greeks and Romans. The course will investigate the nature, function, and meaning of myths in the classical world and their considerable influence on western civilization.

HUM 103-3 The Invention of the Book: Alphabets, Papyri, Parchment, and Print
The book as we know it did not always exist; it was invented. This course will explore the creation and spread of writing, the emergence of scribal cultures, and the birth of the book, which came to be the greatest of all material, cultural and intellectual objects, one that shaped and transformed civilization.

HUM 105-3 Western Civilization from the Ancient World to the Reformation Era
A study of some of the most important features of western civilization from its origins until the mid-16th century. Prerequisite: students who have taken HIST 105 prior to 2007 may not take this course for further credit.

HUM 119-1 Ancient Greece I
An introduction to the classical Greek language.

HUM 152-3 Ancient Greek II
The continuation of Ancient Greek I. Prerequisite: HUM 151, or permission of the instructor.

HUM 161-3 Latin I
An introduction to the Latin language.

HUM 162-3 Latin II
The continuation of Latin I. Prerequisite: HUM 161 or permission of the instructor.

HUM 201-3 Great Texts in the Humanities I
An intensive study of some of the major works which have had a formative influence on the structure and
development of western thought. Reading and discussion of primary texts and major themes which emerge from them will introduce students to essential philosophical, literary, social, and religious themes of western civilization. Texts for this course will be drawn from the Ancient World, Middle Ages and the Renaissance. Prerequisite: HUM 105 (formerly HIST 105 prior to 2007) or PHIL 150 or 30 credit hours. Breadth-Humanities.

HUM 202-3 Great Texts in the Humanities II
An introduction to some of the major works which have had a formative influence on the structure and development of western thought. Reading and discussion of primary texts and the major themes which emerge from them will introduce students to essential philosophical, literary, social and religious themes of western civilization. Texts for this course will be drawn from the 17th century through to the modern period. Prerequisite: HIST 106 or PHIL 151 or 30 credit hours. Breadth-Humanities.

HUM 203-3 Great Texts in the Humanities III
An introduction to classic texts which have endured as monuments of Asian thought and literature. Readings and discussions of primary texts and their central ideas will introduce students to philosophical, literary and religious themes in a selected, major Asian tradition. Prerequisite: 30 credit hours. Breadth-Humanities.

HUM 204-3 Great Religious Texts
A study of some of the key works which have had a formative influence on major religious traditions. Primary texts will be selected to illustrate core elements in the religious understanding of human life and its relationship to the sacred. Prerequisite: 30 credit hours. HUM 130 (HUM 230 prior to 2007) is recommended.

HUM 211-3 Art and Literature of the Italian Renaissance
An interdisciplinary introduction to the art and literature of the Italian Renaissance (c. 1300-c. 1500). Studies the major developments in Renaissance Italian painting, sculpture and architecture alongside some of the most influential texts of the period. Prerequisite: 30 credit hours.

HUM 216-3 The Ancient World
Aspects of the ancient history and culture of the Near East, Greece and Rome. Recommended: HUM 105 (formerly HIST 105 prior to 2007). Students who have taken HIST 216 may not take this course for further credit. Breadth-Humanities.

HUM 219-3 The Early Middle Ages
An examination of Eastern and Western Christendom from Late Antiquity to the 12th-Century Renaissance emphasizing religious, political, cultural, and social change. Students who have taken HIST 219 may not take this course for further credit. Breadth-Humanities.

HUM 227-3 Introduction to the Study of the Future
An introduction to the study of the future as a field of inquiry, its methodology, issues, and the problems that arise when we attempt to understand or control what will happen. Breadth-Humanities.

HUM 240-3 Studies in Modern European Culture
A thematic approach to European culture through the examination of a selection from historical, literary, philosophical and/or aesthetic materials. Prerequisite: 30 credit hours.

HUM 301-4 Ancient Studies
A detailed interdisciplinary analysis of a selected topic, issue, or personality in the Ancient World. Prerequisite: 45 credit hours. Students who have taken this course topic under HUM 382 or 383 cannot take this course for further credit.

HUM 320W-4 The Golden Age of Greece: An Integrated Society
The study of Athenian society in the 5th century BC, a period unique in the record of human achievement during which virtually all the major humanistic fields were either initiated or received significant new impetus. Integrates the remarkable achievements of this ‘Golden Age’ in an interdisciplinary examination of its art, architecture and writings. Prerequisite: 45 credit hours. Writing/Breadth-Humanities.

HUM 303-4 The Latin Humanist Tradition
Studies in the writings of various Latin authors. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 305-4 Medieval Studies
A detailed interdisciplinary analysis of a selected topic, issue, or personality in the Middle Ages. Prerequisite: 45 credit hours.

HUM 307-4 Carolingian Civilization
A focused interdisciplinary study of the Carolingian civilization achieved in early medieval Europe under Charlemagne and his family. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 309-4 Literatures and the Arts Across Cultures
An interdisciplinary study of literary texts in translation and/or arts forms across cultures and periods. Includes a variety of approaches and themes such as translation studies, narrative theory, cultural analysis, global citizenship, modernity, postmodernity. Prerequisite: 45 credit hours. Students who have taken this topic under HUM 381 or 382 may not take this course for further credit.

HUM 311-4 Italian Renaissance Humanism
A study of the major writings, cultural milieu, and influence of the humanist movement of the Italian Renaissance. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 312W-4 Renaissance Studies
A detailed interdisciplinary analysis of a selected topic, issue, or personality from the Italian and/or Northern Renaissance. Prerequisite: 45 credit hours. Writing.

HUM 320-4 The Humanities and Philosophy
An exploration of the characteristic ways in which the humanities, with its emphasis on expression, belief and tradition, presents the important philosophical concepts of western civilization. Based upon an interdisciplinary selection of texts drawn from history, philosophy, literary and the arts. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 321-4 The Humanities and Critical Thinking
A study of the counter-traditions within western civilization. Compares and contrasts diverse traditions within western culture that critique its central value systems. It will focus on the attempts of great artists and thinkers to break with tradition, and the subsequent creation of new ideas and forms of experience and expression. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 322-4 The Humanities and the Critique of Culture
Focuses on the role and practice of cultural critique in the humanities based upon a selection of materials and analytical texts across disciplines. Includes such topics as the dark side of culture and its role in establishing and maintaining relations of domination and subordination, repression and violence. Prerequisite: 45 credit hours.

HUM 323-4 The Humanities in Canada
A study of selected themes from debates in and about the humanities in Canada. Based upon a selection of texts from philosophy, literature, the arts, politics and/or the social sciences. Prerequisite: 45 credit hours.

HUM 325-4 The Humanities and the Natural World
A study of the humanistic, scientific, political, and ideological discourses deriving from concern with the natural environment. Using classical and contemporary sources, this course examines the interaction of humans with the non-human world, and includes such topics as human communities and nature, the immersion of the individual in nature, nature and the human habitat. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 327-4 Critical Issues in the Study of the Future
An exploration of central controversies and issues in the study of the future. Prerequisite: 45 credit hours. Strongly recommended: HUM 227.

HUM 330-4 Religion in Context
An in-depth investigation of a specific case of religious history and tradition. Religion will be studied through the cultural and historical contexts that pervade and structure religious meaning and expression. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 331-4 Studies in Asian Religions
Studies the history and traditions of specific Asian religions through the cultural and historical contexts that structure religious meaning. Prerequisite: 45 credit hours. Breadth-Humanities.

HUM 332-4 Mythology in Context
A detailed interdisciplinary study of the role of mythology within a particular culture or tradition. Prerequisite: 45 credit hours. Recommended: HUM 102.

HUM 340-4 Great Cities in Their Time
An exploration of the cultural and intellectual accomplishments of a specific city that achieved prominence in a particular time period, and had substantial impact and influence on human civilization. Examines the political, social, religious, and cultural factors that help to explain a city’s significance and investigates the achievements of its citizens. Prerequisite: 45 credit hours.

HUM 350-4 Great Figures in Humanistic Tradition
An interdisciplinary study of the life and works of a man or woman who has made a lasting contribution to the humanistic tradition in more than one field of endeavor (e.g. philosophy, politics, literature, economics, religion). Prerequisite: 45 credit hours. Students who have taken this topic under another Humanities course number cannot take this course for further credit.

HUM 360-4 Great Themes in the Humanistic Tradition
An interdisciplinary study of a selected theme that has made a lasting contribution to the humanistic tradition in more than one field of endeavor (e.g. philosophy, politics, literature, economics, religion). Prerequisite: 45 credit hours. Students who have taken this course with this content under another Humanities course number cannot take this course for further credit.

HUM 375-4 The Woodywood Seminar
A special topic in the humanities offered by the Woodywood chair. Prerequisite: 45 credit hours.

HUM 381-4 Selected Topics in the Humanities I
Prerequisite: 45 credit hours.

HUM 382-4 Selected Topics in the Humanities II
Prerequisite: 45 credit hours.

HUM 383-4 Selected Topics in the Humanities III
Prerequisite: 45 credit hours.
HUM 385-4 Selected Topics in European Studies
An interdisciplinary approach to a topic focusing on European thought and culture. Prerequisite: 45 credit hours.

HUM 390-4 Directed Studies in Humanities
Prerequisite: two of any 300 division humanities courses or permission of the chair plus permission of instructor. This course may be used only once for credit towards a degree.

HUM 400-5 Humanities Study Project
A substantial research and writing project culminating in the completion of an essay on a humanities topic. Prerequisite: completion of 75 credit hours which should include at least two 300 division humanities courses; the signature of a faculty member who is willing to supervise the project; approval of the humanities chair. This course may be used only once for credit towards a degree.

HUM 471-3 Practicum I
First semester of work experience in the Humanities Co-operative Education Program. Students should apply to the faculty of Arts Co-op Education co-ordinator one semester in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: a minimum of 30 credit hours with nine credit hours in Humanities courses and a minimum CGPA of 2.75.

HUM 472-3 Practicum II
Second semester of work experience in the Humanities Co-operative Education Program. Students should apply to the Faculty of Arts Co-op Education co-ordinator one semester in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of HUM 471, a minimum of 45 credit hours with nine credit hours in Humanities courses plus a minimum CGPA of 2.75.

HUM 473-3 Practicum III
Third semester of work experience in the Humanities Co-operative Education Program. Students should apply to the Faculty of Arts Co-op Education co-ordinator one semester in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of HUM 472, a minimum of 80 credit hours with nine credit hours in Humanities courses plus a minimum CGPA of 2.75.

HUM 474-3 Practicum IV
Fourth semester of work experience in the Humanities Co-operative Education Program. Students should apply to the Faculty of Arts Co-op Education co-ordinator one semester in advance. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of HUM 473, a minimum of 75 credit hours with nine credit hours in Humanities courses plus a minimum CGPA of 2.75.

HUM 495-2 Humanities Graduating Seminar
A graduating course required for majors and joint majors, focusing on issues and texts in the humanities in the past, present and future. Prerequisite: 16 credit hours in upper division humanities courses or permission of the department. Restricted to majors and joint majors in Humanities. Grading will be on a pass/fail basis.

Information Technology ITEC Faculty of Applied Sciences
ITEC 600-1 Advanced Database Systems
This course expands the knowledge of the database systems into the area of multimedia database systems and techniques used for indexing multimedia. Students will use advanced concepts and terminology of multimedia database systems. The focus is on the advanced database topics covering indexing mechanisms for multidimensional data, image databases, and text databases. Further the semi-structured data, XML and metadata standards are presented together with their application to multimedia databases and their querying.

ITEC 601-1 Computer Graphics
A condensed graduate course for IT majors, with the emphasis on technical aspects of 3-D computer graphics. Hands-on components include development of demo programs, some of those implementing advanced algorithms. Although students are allowed to use any programming language, Java is the recommended one. The course level is intermediate to advanced and requires from students good math background and strong programming skills. Students will acquire new skills in implementing major computer graphics concepts and methods whilst working on their individual projects. Some of these methods, such as smooth shading and rendering are rather advanced and require skills in developing efficient computer programs.

ITEC 602-1 Software Engineering Processes
The course builds on the knowledge of software engineering processes students may have acquired either from their previous study or via their practice in the software development. It provides an overarching and formalizing view of the software engineering process and issues that impact on successful implementation. Starting with basic and worst practices, the Capability Maturity Model and its critique are presented. Software development lifecycle with focus on the requirements process, architectural design and development phase are covered.

ITEC 603-1 Distributed Operating Systems
This course extends the fundamentals of operating systems and guides the students towards the recent advancements in distributed operating systems. This course develops a conceptual and practical understanding of distributed operating systems. It reviews the basic features of operating systems, discusses the core concepts of distributed operating systems, and enables students to specialize in specific topics.

ITEC 604-1 Stochastic Signal Processing
This course extends the fundamentals of operating systems and guides the students towards the recent advancements in distributed operating systems. This course develops a conceptual and practical understanding of distributed operating systems. It reviews the basic features of operating systems, discusses the core concepts of distributed operating systems, and enables students to specialize in specific topics.

ITEC 605-1 Adaptive Filtering Estimation
In conjunction with the stochastic signal processing course, this course provides a unified introduction to the theory, implementation, and applications of statistical and adaptive signal processing methods. Focus is on the key topics of spectral estimation, signal modeling and adaptive filtering.

ITEC 606-1 Network Security and Cryptography
A practical survey of network security fundamentals, applications, and standards. The emphasis is on applications that are widely used on the Internet and for corporate networks, and on standards, especially Internet standards that have been widely deployed.

ITEC 607-1 Intelligent Interfaces
This course examines how intelligent interfaces can facilitate human-computer interaction and collaboration. It introduces theories and techniques for intelligent interaction, and then looks at examples of multi-modal and conversational interfaces.

ITEC 608-1 E-Business Technology
This course examines E-Business protocols, such as auctions and fair division, from the perspective of game theory and computational complexity.

ITEC 609-1 Advanced Networking Protocols
This course critically analyzes some of the networking protocols and synthesizes an integrated review of the architectural foundations of networking in terms of the underlying protocols.

ITEC 610-1 Wireless Communications
This course examines what is and isn’t possible with contemporary wireless systems, focusing on both the underlying technologies and their applications. The course takes a breadth wise look at the spectrum of wireless communications with a scope for specific in-depth technological explorations.

ITEC 611-1 Image Processing
The processing of digital images is given mathematical context by the notion of experimental observation. This course introduces a selection of resulting techniques, including linear system theory and fourier transforms, and an overview of the practical problems that they solve.

ITEC 614-1 3D Computer Animation
This graduate course introduces 3D animation concepts while immersing the students in a team based, interdisciplinary animation project. The students will create and update an in-house standalone animation resource that will be available to the school and future classes.

ITEC 615-1 Virtual Reality
This graduate course introduces 3D animation concepts while immersing the students in a team based, interdisciplinary animation project. The students will create and update an in-house standalone animation resource that will be available to the school and future classes.

ITEC 691-1 Directed Studies
ITEC 692-1 Directed Studies
ITEC 693-1 Directed Studies
ITEC 694-2 Directed Studies
ITEC 695-2 Directed Studies
ITEC 697-3 Directed Studies
ITEC 698-3 Directed Studies
ITEC 699-3 Directed Studies
ITEC 898-6 MASc Project/Research Paper
ITEC 899-6 PhD Thesis

Interactive Arts IART Faculty of Applied Sciences
IART 600-1 Performance in Media Practice and Theory
This course challenges students to expand their practical and theoretical approaches to performance by devising performance experiments with camera mediated telematic links and avatar-based MUEs (multi user environments) while exploring critical discourses around embodiment, virtuality, gender and communication.

IART 601-1 The Body: Practice and Theory
This course is designed to explore philosophical and critical approaches to embodiment and to challenge students to apply these ideas to responsive spaces, artificial life and wearables. Phenomenological skills for analyzing new physical and technological hybrids will be cultivated.

IART 602-1 Non-linear Narrative
This course traces narrative concepts and processes, and their transformation across media/domains. Students investigate narrative dynamics, structures and aesthetics in linear and multi-linear media. The course develops analytical and critical skills through readings, discussions, and the evaluation of interactive experiences.
IART 603-1 Interface and Navigation
This course explores and critiques a range of contemporary design approaches to interface and navigation. Research projects are in the form of a design brief, which applies contemporary and historical models of interface, and explores interface mental models as defined by representation, design and production. Topics include multi-sensory interfaces, gaming interface, emerging device design, cognitive theories of enactment and navigation.

IART 604-1 Electronic Culture
This course introduces key concepts in current discussions of electronic culture, concentrating on complexity, identity, economy and space and time; and explores their use as both analytical tools and frameworks for creative practice.

IART 605-1 Authoring Methodologies
A number of authoring methodologies will be examined in the context of new media. A collaborative project will then be designed and implemented using one or more of these techniques. Authoring Methodologies have broad applications in a variety of development contexts involving interactive arts, IT, and management. The reading resources for the course are drawn from these three areas.

IART 606-1 Multimedia Programming
This course will provide an introduction to programming theory and techniques for audio, video, graphics and text. The historical concept of code as an artistic material and formal compositional process will be examined within a self-directed activity set.

IART 607-1 Designing Virtuality
This course explores and critiques a range of contemporary design approaches to the concept of virtuality. Topics include virtuality and materiality, information design, and post-cybernetic theory particularly in relation to representation, remote sensing and display, networked environments and communities, augmented realities, and tele-presence.

IART 608-1 Experience Design
This course examines the emerging concept of experience design. Computing technology and its use has fundamentally changed design fields. It has emphasized the interaction and experience of the user. This course provides methods and tools for students to critically analyze and generate experience design artifacts and events.

IART 609-1 Design and Creative Methodologies
This course explores and critiques a range of contemporary creative and design methodologies. Topics include strategies from a variety of disciplinary practices including design process, scenario building, and theatrical structures. This includes improvisational processes, collaborative processes, user-centered processes in networked environments and communities, technologically mediated tools and environments used in the support of creative and design processes.

IART 611-1 Reception Analysis
The course introduces the learner to the terminology, concepts and techniques of reception analysis. The course includes several analytical approaches, but favors an understanding of the reader’s active role in the construction of media meaning.

IART 612-1 Multimedia Applications
In this course students will explore multimedia applications to produce an interactive non-sequential work using graphics, sound, text, and typography. Through on-line collaborative exchanges, learners will research and analyze contemporary works and technical resources. Conceptual problem solving activities will be used in class to emphasize visual literacy and foster the development of a personal visual vocabulary.

IART 613-1 Kinesthetic and Active Space
Kinesthetic and Active Space explores convergences between physical, architectural, perceptual, invisible and networked space from an emerging point of human kinesthetic sensibility. This course takes a fundamentally dynamic approach to theoretical paradigms and grounds these in physical experimentation.

IART 614-1 History of Art and Technology
This course will provide students with an historical overview of the dynamic relationship between art and technology. It will show how human creativity gives rise to technical innovation and how those innovations shape cultural expression. Most importantly it will demonstrate how digital media is an extension of human mind/body/culture rather than something being imposed on it. Students will be strongly encouraged to study in teams.

IART 691-1 Directed Studies
IART 692-1 Directed Studies
IART 693-1 Directed Studies
IART 694-2 Directed Studies
IART 695-2 Directed Studies
IART 696-2 Directed Studies
IART 697-3 Directed Studies
IART 698-3 Directed Studies
IART 896-6 MAsc Project/Research Paper
IART 899-6 PhD Thesis

Interactive Arts and Technology
IAT Faculty of Applied Sciences

IAT 100-3 Systems of Media Representation
Systems of two dimensional, three dimensional and interactive visual representation are surveyed as they apply to both physical and digital media. Classical notions of 2D mark making and 3D linear perspective are introduced along with contemporary alternatives with digital media. Topics in interactivity include narrative concepts, color and composition as meaning, and modes of perception and reception. The course concludes with the development of an interactive time-based group project centered on multimedia, user interactions and medium of delivery. Students with credit for TECH 117, 118, 119 and 120 may not take this course for further credit.

IAT 102-3 Graphic Design
Introduction to foundational design principles for visual communication. Organized as a continual interplay of theory and practice, students will examine historical, philosophical, perceptual and semiotic approaches to understanding graphic design, and will explore principles of form, such as structure and composition, hierarchy, form, color, space, scale, typography, and legibility and readability through hands-on projects. Traditional time-based and interactive media forms will be compared and contrasted.

IAT 200-3 Cognition for Design Science
An introduction to cognitive and perceptual processes as foundation to the design of virtual environments for work, learning and play. Students will use problem-solving and collaborative methods to explore a series of design cases on topics in cognitive science. The course will introduce issues of how individuals think, model, and perceive; how groups perceive and collaborate; and how these compare to, and differ from, machine cognition. Drawing liberally from theories in psychology, neuroscience, linguistics, philosophy, sociology, computer science and education, the course emphasizes a multidisciplinary approach to design applications. Prerequisite: students must have completed at least 24 credits, including TECH 100, TECH 101, CMPT 120, and CMPT 125 or equivalents. Recommended: TECH 114.

IAT 201-3 Human-Computer Interaction and Cognition
Introduces key topics in human perception, cognition and embodied action as a foundation of design for human use. It explores the practical application of techniques for analyzing diverse interactive situations and designing effective user interfaces. Students will engage in the analysis and design of a simple user interface, gaining detailed knowledge and experience with the standard basic techniques for interface specification, prototyping and evaluation. Prerequisite: completion of 24 credit hours.

IAT 202-3 New Media Images
Explores the computational nature of technology as applied to contemporary art and design. It is a studio-based, media production course that explores new forms of art and design that are mediated by or modeled after computing processes as opposed to transforming or digitizing existing forms. Prerequisite: Minimum of 18 credit hours. Students with credit for IAT 101, TECH 121, 122, 123 and 124 may not take this course for further credit. Recommended: IAT 100.

IAT 203-3 Cultural Icons and Popular Arts
Introduction to the interdisciplinary field of cultural studies and the historical backdrop of popular arts. Students investigate early sacred imagery, royal spectacle, the rise of museums, world expositions as well as traditions in which artistic practice are incorporated into everyday life. Through discourse analysis, students explore how the emergence of photography and an international avant-garde influence narratives around cultural production. With the advent of television and film, popular arts gather momentum and prominence. Finally, students examine the growing interpenetration of marketing, entertainment, and art, as reflected in key areas of practice, including popular music and anime. Prerequisite: IAT 100, 101. Students with credit for IAT 210, 211 and 212 may not take this course for further credit.

IAT 204-3 Encoding Media Practice
Introduction to programming techniques for new media artists and designers using a visual dataflow language suitable for the rapid prototyping of expressive media systems. Programming techniques are explored within the task environment for music, speech, animation, cinema and their performance. An approach to the performative aspects of programmed media is developed through a series of composition and design projects in software across media. These projects will address the aesthetic, symbolic and poetic potentials of new media in the context of an encoded media practice.

IAT 206-3 Media Across Cultures
Introduces a discursive framework for media, design and cultural interfaces enabling students to interpret, negotiate, and engage with new media with an awareness of the significance of cultural and contextual difference. Assessment is based on written and project work. Prerequisite: completion of 18 credit hours.

IAT 208-3 Drawing as Inquiry
An overview of the various forms and languages of drawing as both a critical and creative research tool. Activities and projects in each unit offer opportunities to understand and apply drawing as a medium for visual thinking and conceptualization. Related social and gender concerns are contextualized through an examination of figurative representations within a broader cultural framework. Students with credit for IAT 216, 217 and 218 may not take this course for further credit.
IAT 209-3 Critical and Creative Thinking

Identifies characteristics of critical thinking and innovative and creative thinking, and develops a framework for discussing and understanding concepts of knowing, questioning, and developing and presenting ideas. Students learn to build an argument through rhetorical methods, explore the history and formulation of criticism, develop and formulate questions as a mechanism for constructing and supporting concept building. Students will explore the characteristics of innovation and creativity, including the importance of informational mediations such as “opinion leaders” and “change agents.” Prerequisite: minimum of 18 credit hours. Students with credit for INTD 114 and 215 may not take this course for further credit.

IAT 209W-3 Critical and Creative Thinking

Identifies characteristics of critical thinking and innovative and creative thinking, and develops a framework for discussing and understanding concepts of knowing, questioning, and developing and presenting ideas. Students learn to build an argument through rhetorical methods, explore the history and formulation of criticism, develop and formulate questions as a mechanism for constructing and supporting concept building. Students will explore the characteristics of innovation and creativity, including the importance of informational mediations such as “opinion leaders” and “change agents.” Prerequisite: minimum of 18 credit hours. Students with credit for INTD 114 and 215 may not take this course for further credit. Writing.

IAT 222-3 Interactive Arts

Introduces key concepts within contemporary digital art practices. Issues surrounding digital art will be explored through readings, the study of artworks, and the creation of their own artistic projects. Prerequisite: completion of 24 credit hours. Students with credit for IAT 322, IART 319, 320, or 321 cannot take this course for further credit.

IAT 230-3 Design for Digital Environments

Communication Design is used as a medium through which to introduce design process, design methods, and the relationship between form and function. Topics include interaction design thinking and projects. Projects are applied, but grounded in historical context and focus on design as a language-based activity. The course builds from simple graphic image and communication problems to grounded brand experience and marketing issues, to urban-scale issues and site considerations. Prerequisite: IAT 100 and 101. Students with credit for IAT 213, 214 and 215 may not take this course for further credit.

IAT 231-3 Visualizing Interaction

Visualizing Interaction explores the theory and development of visual thinking and communication skills students will require to investigate and communicate the dynamics of interaction. Students will be introduced to a range of rapid visualization techniques including 2-d and perspective sketching, schematic representation, information graphics, visual explanations and storytelling through a progressive series of visualization projects. Prerequisite: IAT 100, 101.

IAT 232-3 Prototyping and Human Factors

Prototyping plays a critical role in the design, development and assessment of the physical relationship between people and technology. This course examines the role and value of different prototyping methods, assessing human factors and ergonomics as well as the functional and visual characteristics of new design concepts. Projects will introduce students to the concept of human factors and ergonomics and explore physical prototyping techniques ranging from paper prototyping to basic model building. Prerequisite: IAT 231.

IAT 233-3 Spatial Design

Designing and understanding spaces used by people. The iterative process of making and critiquing, experiencing and analysing spatial form. Compositional ideas for form-making. Critical thinking applied to design. Computers are the principal medium used in this course for form-making and visualisation. Prerequisite: IAT 102 or an approved course in design.

IAT 235-3 Information Design

Introduces theory and practice of designing visual representations of information. Students will learn to visually translate textual, numerical and evidentiary information so that it can be communicated to diverse user communities and contexts. An emphasis will be on understanding how the meaning of images can change over time and across contexts and cultures. Beginning with photographic images, interactive charts, graphs, and maps, projects progress to more complex information in media forms ranging from advanced 2D visualizations. The relationship between visual display is explored in relation to its technology of creation, including code and information architecture. Prerequisite: IAT 102.

IAT 243-3 Sound Interaction

An introduction to the psychoacoustic properties of our sense of space as provided by sound and their digital mediation. Recording, editing and interactive audio design are introduced and used for the composition of audible spatial environments. Students learn the theory and practice of sound as it interacts with visible images and explore fundamental audio techniques for interactive audio-visual presentation. Students with credit for IART 243, 244 and 245 may not take this course for further credit.

IAT 244-3 Digital Photography I: Post Photography

An introduction to digital photography and photographic image modification through the use of computer technology. Students will build skills and techniques in digital photography and image processing for digital printing, the web, and interactive multimedia. Emphasis is placed on acquiring digital photographic skills based on proficiency through the appropriate use of software and image editing tools. Image formatting possibilities are investigated, along with aesthetic/practical aspects of site navigation, design, sequence and consistency. Students with credit for IAT 222, 223 and 224 may not take this course for further credit.

IAT 261-3 Spatial Computing

An exploration of the major concepts of analytical and computational geometry for the computer-aided design of urban spaces. The course will examine the role of mathematics in the design of digital environments, including the role of self-reflection in design practices. Prerequisite: completion of 48 credits, including IAT 200.

IAT 267-3 Introduction to Technical Systems

Introduction to the core technologies and systems used in media-rich interactive environments, including computer hardware, networking systems, input and output technologies, networking and media. The concepts will be examined by working in a high-level media programming environment. This course is equivalent to IAT 267; students with credit for IAT 267 may not take this course for further credit. Students who have obtained credit for, or are currently enrolled in a computing science course at the 300 level or higher, or are approved computing science majors or honors students may not take this course for further credit.

IAT 301-3 Interactive Media Design

Covers physical interaction design and machine perception techniques useful in the design of audiovisual media display systems, physical interaction design, and interactive audio design are introduced and used for the composition of audible spatial environments. Students learn the theory and practice of sound as it interacts with visible images and explore fundamental audio techniques for interactive audio-visual presentation. Students with credit for IAT 243, 244 and 245 may not take this course for further credit.

IAT 302-3 Cognition in Design of Rich Sensory (Interactive) Environments

Examines aspects of cognitive science that can inform the design and testing of this large and growing class of interfaces: VR, AR, ambient intelligence/ubiquitous/mobile computing, public and situated displays, etc. These methods extend HCI to explore a complex systems approach to high-bandwidth human-computer interaction design. Prerequisite: completion of 48 credits, including IAT 200.

IAT 303-3 Cultural Icons and Popular Arts

Develops the interdisciplinary field of cultural studies against the historical backdrop of cultural production and consumerism. Focuses on providing a cultural and historical framework for considering both the rise of a globalized consumer culture and their own roles and practices as artists and designers in the marketplace. Key themes include: the commodification of cultural icons, the role of the artist in postmodernism, the collapse of high and low cultural tastes into a market-driven aesthetic, the enigmas and synergies between the sciences and humanities, the design of brand identities and digital environments, and the role of self-reflection in design practices. Prerequisite: IAT 100 and 101. Students with credit for the following courses or modules may not take this course for further credit - IART 210, 211, 212, IAT 203.

IAT 312-3 Foundations of Game Design

Examines the discipline of game design. Games are studied across three analytical frameworks: games as rules (formal system), games as play (experiential system), games as culture (social system). Includes analytical and practical exercises in game design. Prerequisite: Completion of 48 credits. Students with credit for IART 404, 405 or 406 cannot take this course for further credit.

IAT 313-3 Narrative and New Media

Explores the role of narrative in various media and New Media environments, from traditional linear environments and multi-linear and networked media environments. Examines the relationship of narrative...
elements in the light of the practice and the aesthetics of New Media. It will include an overview of New Media theorists. Prerequisite: completion of 48 credit hours. Students with credit for IART 325, 326, or 327 cannot take this course for further credit.

IAT 320-3 Body Interface

Exploration of embodiment, knowledge, and space within the human relationship to technology. Throughout this course, students will construct and analyze contemporary and historical models of bodily interaction with machines, understand physical practices of embodiment, and apply these concepts to representation, design, and the production of artistic interface. Prerequisite: completion of 48 credit hours, including IAT 301 or 222; students with credit for IAT 311, 332, or 333 cannot take this course for further credit.

IAT 321-3 Kinesthetic Space

Takes an embodied approach to design and artistic practices. An understanding of kinesthesia and kinesthetic methodologies is introduced by combining theory and practice. Students use their bodies as starting points for understanding the logic of artistic, social and architectural space, plus the space of signs and devices. Their projects are based on enhanced or transformed physical and perceptual awareness, and are characterized throughout by collaboration in the area of dance, cyborg theory, architecture and technologically mediated space. Classes are part seminar and part physical workshop. Prerequisite: Completion of 48 credits. IAT 301 is recommended. Students who have taken IART 328, 329 or 330 may not take this course for further credit.

IAT 323-3 Interactive Installation and Performance

Introduces the performing body into the context of interactive arts and technology. Students are asked to reflect upon ideas of liveness, presence, and interaction as they create projects that take the form of interactive installation or performance. Specific contextual background includes references to the intermedia practices of 20th century artists, combined with an emphasis on improvisation and spontaneity. Performance is understood through the filter of locative media and physical and/or virtual networks. Projects combine computational and interaction models to create interactive experience. Prerequisite: completion of: IAT 301 recommended. Students with credit for IAT 413, 414 or 415 cannot take this course for further credit.

IAT 331-3 Interaction and Reception

Audience-driven interaction design issues are introduced through applied projects integrating sub-cultural and demographic research as well as information design modeling within the context of the knowledge economy. Students expand their communication design knowledge, skills and abilities with increasingly complex and ill-defined design problems. A capstone project integrates diverse theory into an interaction design proposal that begins from a specific audience and is tested within it to propose meaningful interactions for the individual user and the cultural groups to which they belong. Prerequisite: completion of 48 credits, including IAT 230. Students with credit for IAT 310, 311, or 312 cannot take this course for further credit.

IAT 333-3 Interaction Design Praxis: Practice and Methods

Examines concepts of design practice and related design methods for interaction designers. Students will be introduced to concepts of practice such as reflective practice. Students will review a wide range of methods focused on conceptualization, use experience, story, symbol, language, prototyping, scenarios, role-playing and enactment, body/mind storming, design games, design happenings, participatory design and the use of workshops. In addition to readings, students will engage in exploratory design method projects. Prerequisite: Completion of 48 credits, including IAT 232 and 331. Recommended: IAT 302. Students with credit for IAT 316, 317 or 318 cannot take this course for further credit.

IAT 334-3 Interface Design

Provides an introduction to the art and design of human-computer interfaces, design methods, prototyping, and evaluation of user interfaces. Examines issues of interactivity and its relation to human contexts and technological systems. The role of aesthetic, symbolic, affective and cultural factors will be assessed in concert with scientific and technological issues. The class is primarily focused on visual interfaces on computer monitors and hand-held devices, but culminates with considerations of increasingly physical interactions in ubiquitous environments. Prerequisite: Completion of 48 credits, including IAT 316, 317 or 318. Students with credit for IAT 317, 318 or 319 cannot take this course for further credit.

IAT 335-3 Analysis of Design Situations

Examines methods for analyzing and gathering requirements for design situations as they relate to the range of ubiquitous computing applications. Examines the conceptual frameworks for understanding behavior in design situations. Students will review a range of methods for requirements gathering, interviews, observation, ethnographic, ethno-methodological, performance workshops and informance design techniques. Students will also study qualitative, quantity focused on visual interfaces on computer monitors and hand-held devices, but culminates with considerations of increasingly physical interactions in ubiquitous environments. Prerequisite: Completion of 48 credits, including IAT 334 and 332. Recommended: IAT 332.

IAT 336-3 Materials in Design

Introduces material properties and performance in the context of interactive artifacts. Covers criteria for material selection, including durability, environmental effects, tactile properties, manufacturing processes, compatibility and effects of particular forms of use. Prerequisite: IAT 233.

IAT 337-3 Representation and Fabrication

Introduces computer-based tools for representing and fabricating designs. Covers the representation of work within a design discipline with the use of visualization techniques to communicate with clients, and the use of digital fabrication technology to build prototypes. Projects are chosen to highlight key representational issues in contemporary design practice. Prerequisite: IAT 233.

IAT 338-3 Interactive Objects and Environments

Develops programming and scripting skills for developing combined software, and hardware prototype versions of interactive objects and environments. Covers the art and design of interactive objects and environments. Methodologies emphasizing embodiment, kinesthetics and haptics are introduced by combining theory and practice. Students develop programming skills for developing working prototypes of software, sensors and hardware. Prerequisite: completion of 48 credit hours, including IAT 233, 235 and 267. Students with credit for IAT 313, 314 or 315 cannot take this course for further credit.

IAT 340-3 Experimental Sound Design Studio

Techniques in real-time audio digital signal processing appropriate for game development and virtual environments are explored including interactive speech, music and sound effects. In conjunction with a study of the theory of the interaction of sound with other media elements students will have the opportunity to pursue interests in the design of sound for moving images and the composition of dynamic, navigable and immersive aural settings embedded in 2D graphic environments. Prerequisite: Completion of 48 credits, including IAT 243.

IAT 342-3 Animated Image Design Studio

Introduces non-programming advanced 3D computer animation techniques. The course mixes (1) hands-on studio-based projects and (2) a non-technical survey of computer animation research areas. The studio track culminates in a team-based animation project where students use their 3D animation skills and artistic knowledge to create a linear or interactive project such as a short film, 3D world, or interactive game or visualization. The conceptual track surveys current research topics in computer animation such as facial animation, behavioral animation, and physical life and interactive systems. Prerequisite: completion of 48 credit hours, including IAT 241.

IAT 343-3 Animation

An introduction to techniques for 3D computer animation such as keyframing, performance animation, procedural methods, motion capture, and simulation. The course also includes an overview of storyboarding, scene composition, lighting and sound track generation. The course will explore current research topics in computer animation such as facial animation, behavioral animation, and physical life and interactive systems. Prerequisite: minimum of 24 credit hours. Students with credit for IAT 241, IART 219, 220 and 221 may not take this course for further credit.

IAT 344-3 Moving Images

Reviews and consolidates the fundamentals of digital video production, including camera and composition skills, the role of sound, lighting, and continuity and montage editing. Students will review and analyze works from traditional cinema and from contemporary digital video. The course will reinforce fundamental concepts that the students will use on a range of digital and networked environments. Prerequisite: completion of 48 credit hours. Students with credit for IAT 242, IART 222, 223 and 224 may not take this course for further credit.

IAT 351-3 Advanced Human-Computer Interaction

Students will learn about and gain experience with a wide variety of interaction technologies, environments and architectures supporting user interaction with systems in work, learning and play. Applied topics may include, but are not limited to, collaboration and computers; ubiquitous and responsive environments; security, trust and privacy; networking; and distributed and heterogeneous interfaces. Emphasis is on practical experience, involving a group design-analysis project in advanced topics in human computer interaction. Prerequisite: completion of 48 credit hours, including IAT 265 or other approved second year programming course, and IAT 201 or equivalent introductory HCI course.

IAT 352-3 Knowledge Media Architectures

Architectures and technologies that people use for creating, capturing, storing, sharing, and accessing knowledge and information are introduced. XML technologies, databases and data mining are reviewed as means for sharing, storing and extracting knowledge in the context of personalized systems. The server-client and service oriented architectures are examined from the perspective of building interactive systems. Internet computing and collaborative technologies, including video conferencing, chat systems, peer to peer systems, social networking, and portals are reviewed as means for creating and sharing knowledge and information. Prerequisite: completion of 48 credit hours, including IAT 265 or other approved second year programming course.
IAT 353-3 Human-Centered Systems Design Studio I
Develops the ability to work in a variety of human-centered system development roles, to understand and be able to deploy a range of technology and interface types, and to begin a process of maturation as designers of human-centered systems. The pedagogical structure of these courses is student engagement in a design case and formal instruction in needed material relevant to the design case. Prerequisite: Completion of 48 credits, including CMPT 225. Recommended: IAT 200, 201.

IAT 354-3 Human-Centered Systems Design Studio II
Develops the ability to work in a variety of human-centered system development roles, to understand and be able to deploy a range of technology and interface types, and to begin a process of maturation as designers of human-centered systems. The pedagogical structure of these courses is student engagement in a design case and formal instruction in needed material relevant to the design case. Prerequisite: Completion of 48 credits, including CMPT 225. Recommended: IAT 200, 201.

IAT 355-3 Introduction to Visual Analytics
Focuses on the design and implementation of interactive computer visualization techniques for the analysis, comprehension, and explanation of large collections of abstract information. The application of principles from perception, information visualization, interaction and visual analytics will be covered. Introduces tools for programming geometric information and displaying the results. Emphasizes development of practical skills in using graphics libraries and tools: students will develop programming experience with relevant examples and techniques. Prerequisite: IAT 201, 265 or CMPT 225 or other approved second year programming course. Recommended: IAT 235.

IAT 386-3 Directed Studies
Independent reading and research topics selected in consultation with individual members of the SIAT faculty. Prerequisite: Completion of 48 credit hours, and permission of the instructor and of the School is required. No more than 6 credits of Directed Studies may be taken.

IAT 387-3 Directed Studies
Independent reading and research topics selected in consultation with individual members of the SIAT faculty. Prerequisite: Completion of 48 credit hours, and permission of the School and the instructor is required. No more than 6 credits of Directed Studies may be taken.

IAT 391-3 Italian Design History
Part of the 9-12 Credit ItaliaDesign Field School curriculum. Field school content is in three phases:
(1) Vancouver: methodology and preparatory research work; (2) field study on-site in Italy, and upon return to Vancouver (3) synthesis and writing-up of research and final arguments. This course fulfilts one half of phase 2 fieldwork in Italy. Student work is primarily in Rome and the hill towns of Tuscany and Florence. It requires using design and social science field methodologies to organize observations made of daily life and its expression in cultural patterns. Pattern "languages" provide a taxonomy, linking prior scholarship to student field work. This work in turn provides historical roots to understanding contemporary Italian design and design industry. Prerequisite: completion of 48 credits. Corequisite: IAT 391/IAT 393 (ItaliaDesign Field School).

IAT 393-3 Interaction Design Workshop I
Involves a sequential series of projects based on field studies in Florence and Milan. Students are required to examine and interpret the impact of design on Italian life and culture in each designated centre. The field study is designed as field research lectures to provide a context for further reflection. Minor independent projects are completed in Florence and Milan followed by a major collaborative project focusing on an interpretation and reflection of the impact of design on life in Italy. Prerequisite: completion of 48 credits. Corequisite: IAT 391/392 (ItaliaDesign Field School).

IAT 394-3 Interaction Design Workshop II
An optional fourth course and directed study. Participants must receive approval for their topics from the Field School instruction team prior to departure to Italy. Students can work individually or in teams on research or applied projects. Research must contribute to the ongoing ItaliaDesign repository. Projects focus on furthering knowledge of Italian Design and Innovation practices and extending the course concepts. Prerequisite: completion of 48 credits, including IAT 391, 392 and 393.

IAT 400-3 Interdisciplinary Design Studio
Students work in teams or individually to develop and evaluate an artistic or product-based design addressing a complex problem. The actual design problems addressed vary from year to year and relate to current social and technological issues in society as well as students' interests and affinities. The course covers the entire spectrum of the production process as it relates to analysis and design from problem definition to prototype and a broad range of perspectives including market feasibility, manufacturing, life-cycle implications, usability and social reception. Prerequisite: Completion of 69 credits. Students with credit for INTD 401, 402, 403, 404, 405, 406 cannot take this course for further credit.

IAT 401-3 Electronic Culture
Explores the dynamics of networked culture, and related tools and practices emerging on the World Wide Web. Students study scientific models of emergence, networks, and complexity, and use them to investigate networked social forms and the cultures that surround them. These include the subcultures of wiks, weblogs, and open source, and networked authoring tools and skills associated with them. Research extends to broader societal trends including the accelerating pace of change, disruptive technologies, "smart mobs," netwar, and "netdemocracy." Software diagramming tools are used to visualize and investigate networks and "netdemocracy." Students will continue working on the project in the follow-up course IAT 404. Prerequisite: completion of 63 credit hours. Students with credit for IAT 401, 402, 403, 404, 405, 406 cannot take this course for further credit. Recommended: IAT 404 in the follow-up semester.

IAT 403-4 Interdisciplinary Design Studio II
(Arts)
Development and evaluation of a media, design or informatics project. The actual projects vary from year to year and relate to current social and technological issues in society as well as students' interests and affinities. Design methods used will vary with project type. Covers the spectrum of the production process from problem definition to prototype. Teams may be formed with students concurrently enrolled in IAT 402. Students continue working on the project in the follow-up course IAT 404. Prerequisite: completion of 63 credit hours. Students with credit for IAT 401, 402, 403, 404, 405, 406 cannot take this course for further credit. Recommended: IAT 404 in the follow-up semester.

IAT 404-3 Interdisciplinary Design Studio II (Science)
Development and evaluation of a media, design or informatics project. The actual projects vary from year to year and relate to current social and technological issues in society as well as students' interests and affinities. Design methods used will vary with project type. Covers the spectrum of the production process from problem definition to prototype. Teams may be formed with students concurrently enrolled in IAT 404. Students may not concurrently enrol in IAT 404 and 405. Prerequisite: IAT 402.

IAT 405-3 Interdisciplinary Design Studio II (Arts)
Development and evaluation of a media, design or informatics project. The actual projects vary from year to year and relate to current social and technological issues in society as well as students' interests and affinities. Design methods used will vary with project type. Covers the spectrum of the production process from problem definition to prototype. Teams may be formed with students concurrently enrolled in IAT 404. Students may not concurrently enrol in IAT 404 and 405. Prerequisite: IAT 403.

IAT 410-3 Advanced Game Design
Students will design a variety of electronic games, culminating in an advanced game project. They will continue to analyze the experience of play within the game, and the connections between the game experience and broader cultural phenomena. Prerequisite: completion of 63 credit hours, including IAT 265 or equivalent programming course. Students with credit for IART 404, 405 or 406 cannot take this course for further credit.

IAT 411-3 Ubiquitous, Mobile and Wearable Computing Design Studio I
Focuses on the design, fabrication and testing of prototype interactive products and systems. The thematic investigation will change each year and will focus on topics central to evolving developments in ubiquitous, mobile and wearable computing. Students will be expected to produce operational prototypes for testing and evaluation. Prerequisite: completion of 69 credits, including IAT 231 and 232. Recommended: IAT 332, 333, 335, 338.
IAT 412-3 Ubiquitous, Mobile and Wearable Computing Design Studio II
Focuses on the design, fabrication and testing of prototype interactive products and systems. The thematic investigation will change each year and will focus on topics central to evolving developments in ubiquitous, mobile and wearable computing. Students will be expected to produce operational prototypes for testing and evaluation. Topics selected by faculty for 412 will differentiate this course from 411.
Prerequisite: completion of 69 credits, including IAT 231 and 232. Recommended: IAT 332, 333, 335, 338.

IAT 420-3 Exhibiting Interactive Installation and Performance Design Studio
Provides a context for students to learn the stages and scope of professional exhibition. Designed to complement the Graduate Project IAT 400 and/or PMA Studio 422-3. Working in teams, the students will learn skills for exhibiting, promoting, marketing, audience and space management, writing strategies for press, grants and conference presentations, creating a viable project web presence, plus infrastructural details such as shipping, set up and take down. Prerequisite: completion of 69 credit hours.

IAT 422-3 Wearing Technologies, Fabricating Experience
Provides a context for students to extend their performance and media arts training into the area of wearable technologies and mobile computing. With distinct art and body perspectives, explores the sensual and expressive dimensions of designing ‘smart garments’ that translate aspects of embodied experience. Fashion and the idea that wearables are a ‘second skin’ will be central to the course. The course will combine conceptual and technical research into mobile wearable computing, with research into artists working specifically with fabrics, textiles and physical gestures. Methodologies that integrate experimentation with materials, development of technical specifications, and the crafting of physical experiences will be explored. Prerequisite: completion of 69 credit hours. Recommended: IAT 320.

IAT 431-3 Speculative Design
Provides students with the opportunity to experiment with designing in various non-normative frameworks provided by cultural studies, critical theory and phenomenology. Students will examine design’s potential for cultural, social and ethical critique of emerging technologies and society. Rather than merely illustrating theoretical positions, this examining and embedding differing theoretical positions, thereby rendering criticism productive. Individual design expertise and voice is emphasized. Prerequisite: completion of 63 credit hours.

IAT 432-3 Design Evaluation
Examines evaluation concepts and methods for designers. Introduces a range of evaluation approaches including informal usability studies, lab experiments, field studies, and analytically-based evaluations. Students will explore techniques for feedback including usability tests, observation, interviews, heuristic reviews, and discursive evaluations. Underlying concepts of evaluation including scientific experimentation, ethnography, phenomenology, and aesthetics will be discussed. Students will learn how to design and implement appropriate evaluation studies for a range of design projects. Prerequisite: completion of 48 credit hours. Recommended: IAT 201 and 235.

IAT 443-3 Interactive Video
An intermediate level investigation of interactivity explored through the context of current display technologies relevant to Interactive Arts and Design. Examines recombinant, computational and compositional structures related to image, sound and video. Students explore video within technologies ranging from cell phones and mobile locative media, and hand held and wearable devices, to 3D immersive virtual and/or networked environments, video art installations, multiple scales of display technology, and responsive spaces. Students will design, produce and critically appraise work. Prerequisite: IAT 344 or 242.

IAT 445-3 Immersive Environments
Introduces advanced 3D computer animation and virtual world building techniques. Integrates hands-on fundamentals with design praxis and theoretical and research concerns. Fundamentals are complemented with examples from current research and design praxis. The studio aspect of the course will include assignments focusing on specific animation and behaviour modelling techniques and a team-based design project. Prerequisite: IAT 343 or 241. Students with credit for IART 416, 417, or 418 cannot take this course for credit.

IAT 451-3 Design of Ubiquitous Environments
Ubiquitous environments are those in which information and control services are available for casual use. The design of such environments requires in-depth understanding of patterns of use, user-centered design processes and knowledge of enabling technologies. This course covers all three areas, with particular emphasis on how technologies enable human action. The well-known example of a smart house is used to motivate and demonstrate how ubiquity can act as a design principle. Prerequisite: Completion of 48 credits, including CMP 225.

IAT 452-3 Developing Design Tools
Introduces approaches to customizing and developing software applications as design-support tools to be employed in dynamic design environments comprising people, tools, other tools, and their interactions in relation to the tasks to be performed. Discusses effective strategies for software development to find the best matching solutions for a given situation and applies the select methods in software design, prototyping, and evaluation. Makes use of software development processes, languages, and notations in representing design of the tools being developed. Experiments with contemporary systems such as drafting tools, modeling tools, simulation tools, prototyping tools for games, Websites, animations, parametric design-modeling systems, etc., and searches their potentials to enhance design environments. Prerequisite: completion of 48 credit hours, including IAT 265 or other approved second year programming course.

IAT 453-3 Human-Centered Systems Design Studio III
Focuses on the acquisition of relevant knowledge and skill in designing, implementing and evaluating human-centered systems. Each of the four Design Studio courses has a similar structure: workshops around key issues arising in the particular human-centered system being designed and a semester-long project with multiple milestones as the primary assessment device. Prerequisite: Completion of 48 credits, including IAT 353 or 354.

IAT 454-3 Human-Centered Systems Design Studio IV
Focuses on the acquisition of relevant knowledge and skill in designing, implementing and evaluating human-centered systems. Each of the four Design Studio courses has a similar structure: workshops around key issues arising in the particular human-centered system being designed and a semester-long project with multiple milestones as the primary assessment device. Prerequisite: Completion of 69 credits, including two of IAT 353, 354 and 453.

IAT 455-3 Computational Media
The representation of media is introduced: specifically one dimensional (sound), two dimensional (images) and three dimensional (moving images). This course focuses on techniques and methods for creating digital video special effects, allowing students to explore their creativity while extending their graphics and programming skills in digital media. Computational techniques based on signal processing are developed that support the creation, manipulation, combination, transformation, compression, storage and display/performance of different media forms. An important aspect is representation in the temporal/spatial vs. the frequency domain and different transformation techniques. Students will be required to generate special effects, critique and analyze effects from movies, develop skills and abilities to manipulate digital video and audio, and implement their own algorithms to express their technical and artistic skills. Prerequisite: IAT 265. Recommended: MATH 151 or equivalent.

IAT 480-3 Special Topics in Interactive Arts and Technology
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the School.

IAT 481-3 Special Topics in Interactive Arts and Technology (Science)
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the instructor.

IAT 482-3 Special Topics in Performance and Media Arts
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the instructor.

IAT 483-3 Special Topics in New Media Environments
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the instructor.

IAT 484-3 Special Topics in Technology in Art and Design
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the instructor.

IAT 485-3 Special Topics in Interactive Design
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: Completion of 69 credits and permission of the instructor.

IAT 486-487-3 Directed Studies
Independent reading and research topics selected in consultation with individual members of the SIAT faculty. Prerequisite: Completion of 69 credits, and permission of the instructor and School are required. No more than 6 credits of Directed Studies may be taken.

IAT 488-1 Directed Studies
Independent reading and research topics selected in consultation with individual members of the IAT faculty. Prerequisite: completion of 69 credit hours. No more than six credit hours of Directed Studies may be taken, and permission of the instructor and school are required.

IAT 490-6 Honors Project Proposal
Preparation for Honors Thesis Project including literature review, ethics approval (if necessary), and presentation of work in progress at end of the

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semester. Prerequisite: Students accepted into Honors Program only.

IAT 491-3 Honors Project
Intensive work related to a particular topic in the field of Interactive Arts and Technology. Involves an extensive individual project under direct supervision of at least two committee members (at least one of whom is a SIAT faculty member) who will provide guidance and critical feedback as necessary. Prerequisite: Successful completion of IAT 490.

IAT 800-3 Foundations of Computational Art and Design
Aims at a robust understanding of models for art and design and representations of these models as symbol systems. It meets these aims through a set of case studies that demonstrate how computational thinking can affect professional and research outcomes. Its outcomes are preparedness for further relevant study and skill developing in using computers to support research and professional work in art and design.

IAT 801-3 Qualitative Research Methods and Design
An introduction to qualitative research practices. Covers structures of research that are prevalent across and at the intersection of the areas of art, design, media, human-computer interaction and information studies, introduces research methodologies and tools, and teaches methods for interdisciplinary work. This course will foster a critical discourse among differences in approaches to research.

IAT 802-3 Quantitative Research Methods and Design
Introduction to the research enterprise from a quantitative perspective. It covers structures of research that are prevalent across fields, introduces research methodologies and tools, teaches methods for interdisciplinary work and fosters a critical discourse around differences among research in different areas. Prerequisite: Graduate student status. This course may not be taken in the same semester ast IAT 805.

IAT 805-5 Research Colloquium
Through an interdisciplinary speaker series, presents research topics relevant to the SIAT graduate program. Engages students in discussion and debate on the utility, results and methods of research. Prerequisite: Enrolment in the SIAT graduate program.

IAT 810-3 New Media
Theory, history and current research in the field of new media. Its methods are the interweaving of design, social/cultural, learning and aesthetic theories. Historical views of the field are provided through an analysis of the histories of technology, moments of media emergence, social and cultural movements, design and aesthetics. Outcomes are exploration, analysis and development of applied methods in order to better understand, design, create and assess new media and future "newer media" developments.

IAT 811-3 Computational Poetics
Provides students the opportunity to engage in critical creative thinking and practice in the discovery of the emergent overlying principles and concepts that enable one to describe, analyze, evaluate and design interactive, multi-mediated experience. The structure of the course will centre on art in the age of information, virtuality, compositional design and practice.

IAT 812-3 Cognition, Learning and Collaboration
Addresses what it means to know something, how people gain and use knowledge and complex skills, how to determine what an individual knows, how humans learn, how humans solve complex problems, how knowledge is created within a social and group context, and how to model human capabilities and performance. It examines theoretical perspectives that inform the design of computer-based mediated environments, products and experiences.

IAT 813-3 Artificial Intelligence in Computational Art and Design
Visual and interactive examples from domains such as combinatorial auction, strategy games, bioinformatics, social interaction and knowledge sharing the course provides insights on artificial intelligence methods in knowledge representation, reasoning and problem solving, machine learning and inter-workings of complex AI system. The topics are presented in a comparative manner to clearly highlight advantages and disadvantages of each method. Students are recommended to have completed prior course work in artificial intelligence.

IAT 814-3 Knowledge, Visualization and Communication
Provides a cognitive and computational framework for understanding and designing graphical and visual representations. Investigates several psychological and computational models of diagram processing, and explore diverse interactive graphical systems.

IAT 830-3 Learning Design and Media
Students will gain an understanding of instructional design as an evolving set of theories and practices based on learning research. They will develop detailed knowledge of design strategies for interactive learning media and will be able to explain how they relate to cognitive theories of learning. As an overarching goal, students will develop the knowledge and skills to conduct basic research projects relating to the design of learning media.

IAT 831-3 Encloding Media Practice
Studies conceptual, aesthetic, and computational issues and techniques involved in the encoding of interactive media objects. It includes study of theoretical and poetical backgrounds in computer-human interaction (Bush, Dinkin, De Landa, Grosz, Deuzelev, Manovich, Murray, Laske, Hamman, Ascott, Penny, Kahn), basic tenets of programming for the arts (media representations, practical machine perception, algorithmic processes, database strategies, display techniques), and practical exercises in programming interactive computer art that may include interactive cinema, audio and narrative.

IAT 832-3 Exploring Interactivity
Analyses, designs and prototypes more effective and more appropriate products and systems to support interactivity. This course will examine these issues through an iterative modeling process.

IAT 833-3 Embodiment and Electronic Performance
Combines theoretical and practical explorations of physicality and live performance in technologically mediated environments. It offers an introduction to phenomenology as a methodology for analyzing and elaborating new physical and technological hybrids. Students devise a performance experiment, while simultaneously exploring critical discourses around embodiment, virtuality, gender, and communication. This course is designated as a research methods course.

IAT 840-3 Models of Networked Practice
Examines several social frameworks for describing mutual activity in work and other activities in computer supported networked environments. The frameworks are used to describe, analyze and design the tools and approaches for new communities of practice. This course is designated as a research methods course.

IAT 842-3 Theory and Design of Games
Games have become a major part of our culture, rivaling the popularity of movies. Drawing on a wide variety of examples and disciplines, this course examines theories and techniques for the analysis of existing games, and the design of new ones. It studies game design, and will provide students with the conceptual and technical tools necessary to critique and design games of all kinds.

IAT 844-3 Spatial Computing
Covers the concepts, algorithms and design principles underlying modern 3D computer animation and visualization from a user interface perspective. Research topics include 3D user interface constructs; information, data and knowledge visualization; 3D graphics and animation; spatial perception; and virtual and immersive environments.

IAT 845-3 Methods for Research into Technological Systems
Key models of research into technological systems are analysed and compared. Together, they frame diverse methodologies for art, social science, business, engineering and information technology. Focus will vary by instructor and disciplinary combination being examined. In contrast to the Research Methods and Strategies Course, this offering considers specialized, discipline specific research tools taken in combination. These may be qualitative, quantitative, laboratory-based, field based (as in survey research), actively experimental or based on secondary analysis of archival data. This course is designated as a research methods course.

IAT 861-0 Practicum I
IAT 862-0 Practicum II
IAT 871-3 Directed Readings I
IAT 872-3 Directed Readings II
IAT 873-3 Directed Readings III
IAT 881-3 Special Topics I
IAT 882-3 Special Topics II
IAT 883-3 Special Topics III
IAT 884-3 Special Topics IV
IAT 885-3 Special Topics V
IAT 886-3 Special Topics VI
IAT 887-3 Special Topics VII
IAT 888-3 Special Topics VIII

IAT 897-6 MA Thesis
Students who are working on their Master of Arts thesis register in this course. This course will not count towards the course work requirements.

IAT 898-6 MSc Thesis
Students who are working on their Master of Science thesis register in this course. This course will not count towards the course work requirements.

IAT 899-6 PhD Dissertation
Students who are working on their PhD dissertation register in this course. This course will not count towards the course work requirements. PhD candidate status is neither required for nor implied by registration in this course.

Interdisciplinary INTD
Faculty of Applied Sciences
INTD 600-1 Research Methods: Problem Formulation
The course outlines the research enterprise. It introduces concepts and methods by which research is structured, understood and conducted. Key concepts include levels of predictive power offered by different kinds of research, the relationship between question and methodology, the structure of models and issues of validity and causation.
INTD 601-1 Research Methods: Research Methodologies and Tools
The course has the dual purposes of introducing students to key methodologies used by researchers in the graduate program in different disciplines and providing hands-on experience with several basic research tools.

INTD 602-1 Research Methods: Anatomy of a Research Area
The course is a case study of a broad research area. Its goals are to show relationships between question and method and how results are used both within a line of inquiry and by other researchers working in the area.

INTD 603-1 Graduate Seminar
This is a weekly seminar featuring guest, faculty or graduate students presenting overviews of their current research. The goal of these presentations for graduate students is to help them analyze on-going research as a basis for formulating their own graduate program and thesis questions. By the conclusion of this seminar, graduate students should have a first draft of their program of study and a developed research (thesis) question.

INTD 604-1 Graduate Seminar
Graduate students attend a weekly research discussion with visiting and faculty researchers. The goal is to enable students to generalize their critical abilities to diverse research beyond one’s own ‘home’ specialty. Outcomes of this work are increased cross-disciplinary connections for framing research questions and proposals, and a better basis to engage teach research efforts. By the conclusion of this module, students should be able to provide cogent, reasoned critiques of research from varied disciplinary specialties.

INTD 691-1 Directed Studies
INTD 692-1 Directed Studies

International Leadership MIL Faculty of Arts and Social Sciences

MIL 800-5 Research Methods
This course will develop understanding of research design from theoretical, analytical, and practical standpoints and provide hands-on experience in a range of social science research techniques. It is designed to prepare MIL students to conduct original independent research for their internship projects and in their future careers. Greater emphasis will be placed on qualitative than on quantitative research methods.

MIL 801-5 International Financial Policy
An advanced course designed to introduce graduate students to international finance issues from a policy perspective. The general orientation of the course is that of the international political economy of finance. From a strong and practical knowledge base, the course will place on qualitative than on quantitative research methods.

MIL 802-5 Regional Focus: Asia
Provides an outline of the main elements to be engaged in interpreting Asia. This course focuses on historical and philosophical issues relating to the understanding of Asia in the context of contemporary global issues.

MIL 803-5 Regional Focus: Latin America
Provides an outline of the main elements to be engaged in interpreting Latin America. This course focuses on historical and philosophical issues relating to the understanding of Latin America in the context of contemporary global issues.

MIL 804-5 Directed Readings I
MIL 805-5 Directed Readings II

MIL 806-3 Internship I
All students in the Master’s program in International Leadership will undertake a year long internship. The work they undertake must be of sufficient depth and breadth to allow the student the opportunity to demonstrate his or her acquired knowledge and skills. Students will be required to produce a work report, which will be an appraisal of the student’s work experience. Graded S/U.

MIL 807-3 Internship II
MIL 808-6 Internship Project
Students complete their internship project and work with their supervisory committee to bring it to a final acceptable form.

International Studies IS Faculty of Arts and Social Sciences

IS 101-3 Introduction to International Studies: Studying Global Conflict and Co-operation
Introduces international studies historically, tracing the patterns of conflicts and co-operation between nations, states and regions. Examines the treatment of ethnic minorities and the responses of the minorities, including ethnic-based secession movements. Reviews cross-border and broader international issues relating to minorities, such as their status as refugees and cross-border support for insurgencies. Prerequisite: IS 200 and one of IS 210, 220 or 230, or permission of the department.

IS 203-4 Ethnic Minorities, Identity Politics, and Conflict in Southeast Asia
Surveys the ethnic minorities of Southeast Asia, focusing on their relations with other ethnic groups, especially majority populations, and governments. Examines the treatment of ethnic minorities and the responses of the minorities, including ethnic-based secession movements. Reviews cross-border and broader international issues relating to minorities, such as their status as refugees and cross-border support for insurgencies. Prerequisite: IS 200 and one of IS 210, 220 or 230, or permission of the department.

IS 210-3 Comparative World Politics: Trajectories, Regimes, Challenges
Introduces students to the variety of systems of governance in the world today, examines the historical and cultural sources of their different developmental trajectories, and assesses the challenges they face in the future. Prerequisite: IS 101 or consent of the department. Breadth-Social Sciences.

IS 220-3 Introduction to International Economics
Introduces students to the basics of international economics. Topics are drawn from both international trade: the gains from trade, the consequences to impediments to trade and factor mobility; and from international macroeconomics: the basic Mundell-Fleming framework; understanding the role of international organizations like the IMF, World Bank and BIS, and a case study of the European Union and its common currency. Prerequisite: ECON 103 and ECON 105.

IS 230-3 Transnationalism and Society
Provides a survey of the basic issues relating to the study of transnationalism and society. Topics covered include identity and ethnicity, urbanization, migration, social networks, politics, and religion. Prerequisite: IS 101 or permission of the department. Breadth-Social Sciences.

IS 231-3 Introduction to South Asia
Provides an introduction to religion, culture and society in South Asia, primarily from the perspective of social and cultural anthropology, developing specialization in the region. Prerequisite: IS 101 or permission of the department.

IS 232-3 Introduction to Southeast Asia
Provides an introduction to religion, culture and society in Southeast Asia, primarily from the perspective of cultural and social anthropology, developing specialization in the region. Prerequisite: IS 101 or permission of the department.
IS 320-4 Selected Problems in the International Economy
Introduces students to selected problems in the international economy. Topics are drawn from both international trade and international macroeconomics. Agricultural subsidies, tariffs and quotas, the Multi-fiber Agreement, the evolution of the world’s airline industries, and the “brain drain” are of interest. Macroeconomics topics include the theory and evidence associated with currency crises, economic integration including understanding the NAFTA, the EU and German reunification and, more speculatively, the potential for Korean unification. Why economic growth is successful in some countries and not others will be explored. Prerequisites: IS 220, and one of IS 210, 220 or 230; or ECON 342; or ECON 345, or permission of the department. Students with credit for INTS 320 may not take this course for further credit.

IS 400-4 State Building and State Failure: Comparative Perspectives
Challenges posed by state failure and fragility, and the tasks of reconstructing or building viable states, involve critical security dimensions that are of both a military and non-military nature. The issues of security, development, stabilization and democratization are intricately linked. Exploration of the extensive body of literature on state formation and decay in various regional settings with an emphasis on the causes of state failure, and the prospects of state rebuilding. Prerequisite: IS 200, and one of IS 210, 220 or 230 and eight upper division credit hours within stream 1 or permission of the department.

IS 402-4 The Great Game: International Politics in Asia in Historical Perspective
Examines the causes and impact of the Great Game on Asia as well as on the international relations of the major imperial powers. Due to multi-state region covered by the subject matter, the approach will be thematic and comparative. Prerequisite: IS 200, and one of IS 210, 220 or 230, and eight upper division credit hours within stream 1, or permission of the department.

IS 403-4 Gender, Conflict and Nationalism
Provides a survey of social, economic and political relations at the intersection of gender and nationalism. Both theories and practices of nationalism are explored and their gender implications probed in historical perspective. Feminist perspectives of nationalism and related conflict are also explored, focusing on specific sites and scales of nationalism: the state, the home, and the body. From nationalism in its particular context to contemporary liberation movements, the gendered politics of dissolution and territory are examined. Prerequisite: IS 200, and one of IS 210, 220 or 230, and eight upper division credit hours within stream 1, or permission of the department.

IS 406-4 Selected Topics – Complex Emergencies
Explores the background, dynamics, and outcomes of complex humanitarian emergencies generated by widespread violence and national catastrophes, drawing on country and regional case studies of international intervention to implement post-conflict and post-disaster recovery. Prerequisite: IS 200, and one of IS 210, 220 or 230, and eight upper division credit hours within stream 1, or permission of the department.

IS 407-4 Selected Topics – Terrorism
Considers the national and international impact of terror and terrorist organizations both in historical context and as a function of current events. Prerequisite: IS 200, one of IS 210, 220 or 230, and eight upper division credit hours within stream 1, or permission of the department.

IS 408-4 Directed Readings I
Independent research in a selected international studies area, under the supervision of at least one faculty member. A research report is required. Prerequisites: IS 200, one of IS 210, 220 or 230, and eight upper division credit hours within stream 1, or permission of the department.

IS 409-4 Special Topics I
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: IS 200, one of IS 210, 220 or 230, and eight upper division credit hour within stream 1, or permission of the department.

IS 410-4 Politics, Institutions and Development
The quality of institutions’ exercises a crucial influence on the prospects for development. Aims are to interrogate this claim through analysis of different paths of economic growth and change across the developing world. Examination of the ways in which politics influences economic growth and distribution; the relationships between political systems and patterns of development; and the politics of institutions and state formation. Prerequisite: IS 210, one of IS 200, 220 or 230, and eight upper division credit hours within stream 2, or permission of the department.

IS 418-4 Directed Readings II
Independent research in a selected international studies area, under the supervision at least one faculty member. A research report is required. Prerequisite: IS 210, one of IS 200, 220, or 230, and eight upper division credit hours within stream 2, or permission of the department.

IS 419-4 Special Topics II
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: IS 210, one of IS 200, 220 or 230, and eight upper division credit hours within stream 2, or permission of the department.

IS 421-4 The Economics of International Organisations and Development
Develops an understanding of the interactions between international organizations, economic theory, and implementation of economic policies. Explores as well the impact of their interventions in some chosen countries. Prerequisite: IS 220, one of IS 210, 220 or 230, and eight upper division credit hours within stream 3; or permission of the department.

IS 424-4 Directed Readings III
Independent research in a selected international studies area, under the supervision at least one faculty member. A research report is required. Prerequisite: IS 210, one of IS 200, 220 or 230, and eight upper division credit hours within stream 3, or permission of the department.

IS 427-4 Selected Topics – Globalization, Poverty and Inequality
Examines evidence and argument on the economic consequences of globalization, with regard to growth and to trends in equality/inequality, and to poverty; and considers the conceptualization and measurement of poverty, its causes and dynamics, and public policy for poverty reduction. Prerequisite: IS 220, one of IS 200, 210 or 230, and eight upper division credit hours within stream 3, or permission of the department.

IS 428-4 Directed Readings IV
Independent research in a selected international studies area, under the supervision of at least one faculty member. A research report is required. Prerequisite: IS 220, one of IS 200, 210 or 230, and eight upper division credit hours within stream 3, or permission of the department.

IS 429-4 Special Topics III
Specific details of courses to be offered will be published prior to registration each semester. Prerequisite: IS 220, one of IS 200, 210 or 230, and eight upper division credit hours within stream 3, or permission of the department.

IS 450-4 Seminar on Global Problems in Interdisciplinary Perspective
An interdisciplinary course which aims to bring together different disciplinary perspectives on international affairs through the study of in-depth particular contemporary problems. Prerequisite: International Studies major or honors students. Completion of 20 upper division credit hours in one of the three streams in international studies.

IS 451-4 Seminar on Core Texts in International Studies
An interdisciplinary course which aims to bring together different disciplinary perspectives on international affairs through the study of influential texts which, between them, involve study of core themes to the program: development, governance and civil society, war and peace, human rights and questions of culture and ethnicity. Prerequisite: International Studies major or honors students. Completion of 20 upper division credit hours in one of the three streams in international studies.

IS 452-4 Special Topics – Field School I
A multidisciplinary study of a selected country or region. Prerequisite: completion of 45 credit hours and permission of the department.

IS 490-4 Honors Seminar
Intended for the research and preparation of materials for the honors graduating essay. Prerequisite: Admission is by permission of the instructor and the School. Open only to students who have been accepted into the honors program.

IS 499-5 Honors Essay
In addition to regular meetings with their supervisors, students will be required to submit a major paper on a topic to be selected in consultation with the School. Prerequisite: IS 490. Admission is by permission of the instructor and the School. Open only to students who have been accepted into the honors program.

Italian ITAL

Faculty of Arts and Social Sciences

Department of French

ITAL 100-3 Introductory Italian I
This course is designed to provide the student with the means of acquiring basic spoken fluency and reading facility.

ITAL 101-3 Introductory Italian II
This course continues the work of ITAL 100. Considerable emphasis will be placed on oral and reading facility as well as basic writing skills. Prerequisite: ITAL 100.

ITAL 200-3 Intermediate Italian I
An intermediate Italian course continuing the work of ITAL 101. In addition to consolidation of oral practice, grammar, reading and composition skills, a cultural component is included as well as selected readings from Italian authors. Prerequisite: ITAL 101.

ITAL 201-3 Intermediate Italian II
ITAL 201 continues the work of ITAL 200. Oral and written competence in Italian are extended through grammar review, oral practice, cultural studies, selected readings from Italian authors and multimedia activities. Prerequisite: ITAL 200.

ITAL 300-3 Advanced Italian: Language and Culture
Will continue the work of the 200-level courses with emphasis on the cultural aspects of Italian life. How does one live in Italy today? What are the cultural differences between the various regions? Fluency in language use, both oral and written. Prerequisite: ITAL 201 or permission of Instructor.
Japanese JAPN
Faculty of Arts and Social Sciences
Department of Linguistics
Language Training Institute

JAPN 100-3 Introduction to Japanese I
A comprehensive introduction to the Japanese language providing basic oral and written communication skills through an emphasis on vocabulary, grammar, and culture. The three Japanese writing systems will also be introduced (Hiragana and Katakana for production; some Kanji for recognition only). Students with previous knowledge of Japanese should not enrol in this course without consulting a Japanese instructor.

JAPN 101-3 Introduction to Japanese II
Continues the work of JAPN 100. Prerequisite: JAPN 100 or equivalent.

JAPN 200-3 Advanced Beginners' Japanese I
Continues the work of JAPN 101. Emphasizes all four skills: listening, speaking, reading, and writing. Everyday language is emphasized. Prerequisite: JAPN 101 or equivalent.

JAPN 201-3 Advanced Beginners' Japanese II
Continues the work of JAPN 200. Prerequisite: JAPN 200 or equivalent.

Kinesiology KIN
Faculty of Applied Sciences

KIN 105-3 Fundamentals of Human Structure and Function
Basic anatomy and physiology of the skeletal, muscular, nervous, endocrine, cardio-respiratory, urinary, digestive, immune, and reproductive systems. (Distance education). Kinesiology majors and honors students may not receive credit for KIN 105. KIN 205 or 208 may be used as a substitute for KIN 105 by students in the Kinesiology Minor and Certificate programs. No student may take both KIN 105 and KIN 208 for credit. Recommended: grade 11 biology, chemistry and physics.

KIN 110-3 Human Nutrition: Current Issues
An introduction to human nutrition with an emphasis on topics of current interest. The material is presented in a Canadian context to focus on nutrition practices and problems in this country. Students will gain an understanding of factors affecting food selection and the role of nutrition in maintaining good health. Students will develop the ability to discriminate between reliable and unreliable information on the subject of food and nutrition.

KIN 111-3 Food and Food Safety
This course includes basic information on food, the safety of the food supply and current issues around the production, storage and distribution of food. Students will gain an understanding of basic food components, the physical foundations of food science, and the elements of food processing and preservation. Food-borne disease, biotechnology, irradiation of food, contaminants and additives in food, Canadian food labelling and advertising regulations, and food consumption trends will be examined. Nutritional biochemistry concepts will be interfaced with practical questions of food choice and eating practices. Recommended: grade 11 chemistry.

KIN 140-3 Contemporary Health Issues
Explores health from a holistic perspective, in which health is viewed as physical, psychological, and social well-being. Considers genetics, environment, personal health behaviors (such as diet, exercise, stress management, and drug use), socioeconomic status, health care delivery systems, and aging with the intent to improve students’ abilities to evaluate health information. Breadth-Science.

KIN 142-3 Introduction to Kinesiology
Basic procedures for the assessment of the status and performance of the individual according to the principles of anthropometry, functional anatomy, biomechanics, exercise physiology, and motor learning. Recommended: grade 11 biology, chemistry and physics. Breadth-Science.

KIN 143-3 Exercise: Health and Performance
Introduces the student to exercise physiology. Focuses on personal exercise prescription to improve aerobic capacity, muscular strength and endurance, and flexibility. Also discusses athletic conditioning, e.g. speed and power training. The effects of nutritional and environmental factors on exercise and the role of exercise in weight control and stress management are considered. Recommended: medical clearance from a personal physician. Breadth-Science.

KIN 180-3 Introduction to Ergonomics
Intended for students with a potential interest in ergonomics or human factors. The course surveys the design of work, the workplace environment, information systems, and consumer products. Topics include musculoskeletal disorders, manual materials handling, workplace design, organization of work, design of human/machine interfaces, environmental ergonomics, industrial design, and legal and social issues. Prerequisite: Grade 12 Biology or Physics, Grade 12 Math.

KIN 180W-3 Introduction to Ergonomics
Intended for students with a potential interest in ergonomics or human factors. The course surveys the design of work, the workplace environment, information systems, and consumer products. Topics include musculoskeletal disorders, manual materials handling, workplace design, organization of work, design of human/machine interfaces, environmental ergonomics, industrial design, and legal and social issues. Prerequisite: Grade 12 Biology or Physics, Grade 12 Math. Writing.

KIN 201-3 Biomechanics
This course will cover the application of basic mechanics to human movement. It will provide students with a basic understanding of how forces act on body segments and how movements are produced. The subject matter of this course is relevant to quantifying all forms of physical activity, from activities of daily living, physically challenged movement patterns, to elite athletic performance. It also has applications in medical settings, including rehabilitation and sports medicine. Prerequisite: MATH 150, 151 or 154, MATH 152 or 155 (may be taken concurrently), PHYS 101 (or 120 or 125 or 140), KIN 142. Quantitative.

KIN 205-3 Introduction to Human Physiology
An introductory survey of human physiology with an emphasis on mechanisms of regulation and integration. Anatomy of structures will be detailed only when it is critical to a functional understanding. Although this is intended as a survey course, some topics will be covered in reasonable detail in order to give insight into mechanisms of function. KIN 205 may not be used as a substitute for KIN 205 by students in the Kinesiology Major and Honors programs. Prerequisite: MBB 221 or (BCH 221), PHYSY 101 (or 120 or 125 or 140), and PHYS 102 (or 121 or 126 or 141). Kinesiology majors and honors students who have taken KIN 105 must also take KIN 205. For students taking both of these courses, credit will only be given for KIN 205.

KIN 207-3 Information Processing in Human Motor Systems
Students are introduced to human motor systems from psychological, physiological and computational approaches. Although a behavioral (information processing) approach to understanding voluntary goal-directed movement is stressed, research from a variety of distinct areas is integrated in an attempt to provide a coherent picture of understanding of human motor systems. Prerequisite: KIN 142 or permission of instructor.

KIN 208-3 Introduction to Physiological Systems
An introduction to anatomy and physiological function of the major human systems, from a biomedical engineering perspective. Normally only available to students in the Biomedical Engineering Program. KIN 208 may be used as a substitute for KIN 105 by students in the Kinesiology Minor and Certificate programs. Kinesiology Major and Honors students may not receive credit for KIN 208. No student may take both KIN 105 and KIN 208 for credit, or both KIN 205 and KIN 208 for credit. Prerequisite: CHEM 180.

KIN 212-3 Food and Society
This course deals with the cultural, social, agricultural and economic factors which influence food selection and nutrition. Students will explore traditional diets of various ethnic groups, and diet modification as immigrants adjust to life in a new country or to an urban setting. The course will also examine domestic and global food security, hunger as developing and developed world, and sustainable methods of meeting the increasing world food demand. Prerequisite: KIN 110.

KIN 241-3 Sports Injuries – Prevention and Rehabilitation
Involves delineation of the role of the sports therapist and will study the structural and functional characteristics of the body with regard to the prevention of injury in sport. A first aid approach to athletic injuries will be developed with practical experience in routine treatments. Prerequisite: KIN 142.

KIN 301-3 Biomechanics Laboratory
A laboratory course on the quantitative biomechanical evaluation of human movement. Students will learn analysis techniques for quantifying kinematics and kinetics of body segments in athletes, normal populations, and special populations during activities such as walking and jumping. Experiments will look at the nature of muscular force generation, and the mechanical impedance properties of the musculoskeletal system, as well as patterns of muscle activation, using surface EMG. Prerequisite: PHYS 102 (or 121 or 126 or 141), PHYS 130 (or 131 or 141), KIN 201. Quantitative.

KIN 303-3 Kinanthropometry
A study of human size, shape, proportion, composition, maturation and gross function related to basic concepts of growth, exercise, performance and nutrition. Prerequisite: KIN 105 or 142, and STAT 201 or an equivalent statistics course.

KIN 304-3 Inquiry and Measurement in Kinesiology
This course covers the evaluation of measurement quality, test construction and assessment, and computer techniques for data capture and signal processing relevant to issues in kinesiology. Prerequisite statistical knowledge will be put into practice when discussing typical research designs, modeling and hypothesis testing in kinesiology. Prerequisite: KIN 142, 201, 205, 207, and STAT 201. Quantitative.

KIN 304W-3 Inquiry and Measurement in Kinesiology
This course covers the evaluation of measurement quality, test construction and assessment, and computer techniques for data capture and signal processing relevant to issues in kinesiology. Prerequisite statistical knowledge will be put into Simon Fraser University 2007 • 2008 Calendar
practice when discussing typical research designs, modeling and hypothesis testing in Kinesiology. Prerequisite: KIN 142, 201, 205, 207, and STAT 201. Writing/Quantitative.

KIN 305-3 Human Physiology I Deals with the physiology and pathophysiology of the cardiovascular, respiratory, and renal systems in detail. Prerequisite: KIN 201, 205, CHEM 281 (or 150 and 155), PHYS 102 (or 121 or 126 or 141), MATH 155 (or 152). Students other than kinesiology majors require KIN 205 or BISC 305 plus permission of the instructor.

KIN 306-3 Human Physiology II (Principles of Physiological Regulation) Examines the regulation of body functions with an emphasis on the endocrine, gastrointestinal and neuronal systems. The course focuses on integration of physiological mechanisms at the cellular and organ levels. Examples of abnormal human physiology are used to illustrate important principles. Prerequisite: KIN 201, 205, 207, CHEM 281 (or 150 and 155), PHYS 102 (or 121 or 126 or 141), MATH 155 (or 152). Students other than kinesiology majors require KIN 205 or BISC 305 plus permission of the instructor.

KIN 308-3 Experiments and Models in Physiology A laboratory course in the measurement, analysis and computer modeling of human physiological systems from a biomedical engineering perspective. Laboratory topics include muscle electrophysiology, thermoregulation, human locomotion, electrocardiology, and respiratory modeling. Prerequisite: KIN 208. Recommended: MATLAB Experience.

KIN 310-3 Exercise/Work Physiology The study of human physiological responses and adaptations to acute and chronic exercise/work. Cardiorespiratory, cellular and metabolic adaptations will be studied and discussed in detail. Prerequisite: KIN 205. Recommended: KIN 201 and 207.

KIN 311-3 Applied Human Nutrition The principles of nutritional biochemistry are applied to nutrition in life cycle - pregnancy, lactation, infancy, childhood, adolescence and aging. The second part of the course deals with common disease conditions where nutrition plays an important role in prevention or treatment or both. The course is presented in the Canadian context featuring sources of help on Canadian practice, standards and regulations. Prerequisite: KIN 105 or 205 and 110. Students with credit for KIN 220 may not take KIN 311 for further credit.

KIN 312-3 Nutrition for Fitness and Sport This course examines the theory and application of nutrition for fitness and sport. Students will study issues around dietary practices commonly promoted for performance enhancement, including mechanisms, effectiveness, risks and regulations. Students will learn skills for critical evaluation of nutrition research and nutrition claims, and will employ these in several small group projects investigating specific nutrition issues and products. Prerequisite: KIN 105 (or 205), and 110.

KIN 325-3 Basic Human Anatomy For students interested in physical education, health science professions and liberal arts. Brief discussions on applied anatomy, aging, common dysfunctions and diseases. Emphasis on applied anatomy and relationship between structure and function. Prerequisite: KIN 142 and either KIN 105 (with a grade of C or higher) or KIN 205. Available only through correspondence, this course will not be counted as an upper level optional course for a major in kinesiology. Students with credit for KIN 326 may not take KIN 325 for further credit.

KIN 326-4 Functional Anatomy Pursues a systematic study of human anatomy with emphasis on functional applications. A comparative study of organs and body systems using laboratory dissections to provide an understanding of the three dimensional organization of the human body. Participation in all labs is required. Prerequisite: KIN 142, 201, 205 and at least 60 hours of undergraduate course credit. Students with credit for KIN 325 may not take KIN 326 for further credit.

KIN 336-3 Histology Light and electron microscopic study of mammalian tissues and organs with emphasis on human systems. Prerequisite: one of KIN 325, 326, BISC 305, 316.

KIN 340-3 Active Health: Behavior and Promotion Relationships among health, physical activity, and other health-associated behaviors are examined. In addition, the theories and models of health behavior, in the context of intervention and promotion strategies, are discussed. Pertinent background information is provided. Prerequisite: KIN 142, 201 and 207 (or PSYC 201). Recommended: KIN 140.

KIN 342-3 Active Health: An Extension of KIN 143, Exercise Management, this course parallels the on-campus course KIN 343. This course is designed for students completing the health and fitness certificate and/or a kinesiology minor. The goal of the course is to provide students with an opportunity to appreciate principles of exercise leadership, assess individual fitness needs, design programs and monitor effects of prescribed exercise. This course is available only through distance education. Prerequisite: KIN 105 (or 205), 142 and 143. Kinesiology majors and honors students may not receive credit for KIN 342.

KIN 343-3 Active Health: Assessment and Programming An extension of KIN 143, Exercise Management, designed to provide students with an opportunity to appreciate principles of exercise leadership, assess individual fitness needs, design programs and monitor effects of prescribed exercise. The course includes a 34 hour practicum. Prerequisite: KIN 142, 143 and 205; STAT 201 (or equivalent statistics course). KIN 340 (may be taken concurrently). Students with credit for KIN 342 may not take KIN 343 for further credit. Quantitative.

KIN 351-3 Practicum I The first semester of work experience in the Kinesiology Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: Students must complete Bridging Online (visit www.sfu.ca/coop/bol for further details) at least two semesters before their anticipated co-op placement. Students must then apply to the Kinesiology Co-op Program by the first week of the semester preceding the work semester. Normally, students will have completed a minimum of 45 credit hours by the end of the semester of application. KIN 142, KIN 143 plus at least one other kinesiology undergraduate course with a minimum GPA of 2.50. Work terms are graded as pass/fail (P/F).

KIN 352-3 Practicum II The second semester of work experience in the Kinesiology Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: KIN 351. Work terms are graded as pass/fail (P/F).

KIN 357-3 Psychology of Motor Skill Acquisition An examination of phases of skill acquisition, transfer of training, training principles, retention of motor skills, and the influence of motivation, personality and social factors on the acquisition of skill. Prerequisite: KIN 207.

KIN 375-3 Human Growth and Development The fundamentals of physiological growth and development from conception to maturity. Topics include form a strong foundation for those interested in designing appropriate activity programs for children of all ages. Prerequisite: KIN 105 or 205, and 142.

KIN 380-3 Occupational Biomechanics This course will teach the principles of biomechanical analysis and their application in the workplace. Topics include techniques for measurement and analysis of movement; analysis of forces and accelerations in three dimensions; work and power; simple biomechanical and biodynamic models; standards for lifting and carrying, their application and limitations. Prerequisite: KIN 180, 201, 205 and 326 which may be taken concurrently. Quantitative.

KIN 381-3 Psychology of Work The application of psychological principles and methods to the study of human performance at work. A systems approach will be taken to study the interactions among the individual worker, his/her task, the tools and equipment, the group of workers, and the management structure of the organization. Prerequisite: PSYC 210 or both of KIN 207 and STAT 201. Corequisite: STAT 201 may be taken concurrently. Recommended: KIN 180.

KIN 382-3 Workplace Health The focus of this course will be the study of the physical environment and its effects on the health, safety and performance of the worker. Physical problems associated with noise, vibration, lighting, radiation, dust and ventilation will be examined together with methods of recognition, treatment, protection and prevention. Prerequisite: KIN 142, 201, 205, PHYS 130 (or 131 or 141). Quantitative.

KIN 383-3 Human-Machine and Human-Computer Interaction Human information processing and motor control factors are considered as factors relevant to effective, usable human-machine interfaces. A user-centered approach deals with task analysis, context of use, information processing demands, the interface, and the design, assessment and usability of tools, machines and computers. Prerequisite: KIN 180, 201 and 207.

KIN 402-3 Mechanical Behavior of Tissues An extension of KIN 201, designed to provide students with an understanding of tissue structure-function relations in health and disease, from a biomechanical perspective. Topics include the effect of disease (and aging) on tissue properties, the mechanics and prevention of tissue injury, and the design of implants and prostheses. While the focus will be primarily on analysis of the musculoskeletal system at the tissue and whole-body levels, we will also consider biomechanical models of the cardiovascular and respiratory systems. Prerequisite: KIN 201.

KIN 407-3 Human Physiology Laboratory Experiments dealing with the nervous, muscular, cardiovascular, respiratory, and renal systems are covered. Prerequisite: PHYS 130 (or 131 or 141). KIN 305 and 306, one of which must already have been completed and the other can be taken concurrently. Quantitative.

KIN 412-3 Molecular and Cellular Cardiology This course entails a detailed analysis of the molecular and cellular basis of cardiac function. The material will be derived from myriad disciplines including: anatomy (histology and ultrastructure),
biomechanics, physiology, electrophysiology, biochemistry and molecular biology. A particular emphasis will be placed on the mechanisms by which the heart responds to stresses such as ischemia and exercise. Prerequisite: KIN 305.

KIN 415-3 Neural Control of Movement
An in depth treatment of neuromotor physiology. Synaptic inputs and cell interactions in the spinal cord are used to illustrate the general principles of interaction in the nervous system. Other topics include central and peripheral motor control, the vestibular system and the visual system. Prerequisite: KIN 306 or BISC 305, and KIN 326.

KIN 416-3 Control of Limb Mechanics
Control of the human musculoskeletal system examined from the perspective of mechanical impedance. Mechanics of individual muscles, single joints spanned by multiple muscles, and multijoint limb segments are discussed in the context of physical interaction with the environment. Prerequisite: KIN 201 and 306.

KIN 420-3 Selected Topics in Kinesiology I
Selected topics in areas not currently offered as formal courses within the undergraduate course offerings in the School of Kinesiology. The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: to be announced in the Undergraduate Schedule of Classes and Examinations.

KIN 421-3 Selected Topics in Kinesiology II
Selected topics in areas not currently offered as formal courses within the undergraduate course offerings in the School of Kinesiology. The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: To be announced.

KIN 422-3 Selected Topics in Kinesiology III
Selected topics in areas not currently offered as formal courses within the undergraduate course offerings in the School of Kinesiology. The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: To be announced.

KIN 423-3 Selected Topics in Kinesiology IV
Selected topics in areas not currently offered as formal courses within the undergraduate course offerings in the School of Kinesiology. The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: To be announced in the Undergraduate Schedule of Classes and Examinations.

KIN 426-3 Neuromuscular Anatomy
This course explores human neuromuscular anatomy using a lecture format supplemented by course readings, an anatomy atlas and tutorials which are presented in an interactive fashion via the Macintosh Computer Laboratory on campus. A strong grounding will be given in neuroanatomy with additional emphasis on the limb musculature and its innervation. Prerequisite: KIN 325 or KIN 326 or PSYC 280

KIN 430-3 Human Energy Metabolism
Pathways of energy flow in animals and man, and the relationship of biological energy transduction to the needs of the whole animal. Quantitative aspects of bioenergetics and adaptation to changes in energy supply and demand. Measuring techniques applied to adaptations to muscle activity and variations in food intake. Prerequisite: KIN 306 or 310 or MBB 321 (or BICH 321).

KIN 431-3 Environmental Carcinogenesis
An introduction to the field of environmental carcinogenesis. Emphasis will be on the complex interactions of lifestyle factors, carcigen exposure, genetic susceptibility and dietary habits as determinants of cancer risk. Class work will include discussions of new techniques to monitor exposure to environmental carcinogens and of regulatory aspects of governmental agencies towards carcogenic agents, as well as approaches being used by such agencies in risk assessment. Prerequisite: MBB 221 and at least 90 credit hours.

KIN 442-3 Biomedical Systems
Concurrent and future trends in biomedical analysis will be introduced. Since these involve a philosophy of problem-solving rather than as a catalogue of techniques, they will be applied to a number of very different areas: bioinformatics, kinesiology and biomechanics. Prerequisite: MATH 155 (or 152), PHYS 130 (or 131 or 141), KIN 305, 306.

KIN 444-3 Cardiac Disease: Prevention and Rehabilitation
Examines the etiology, prevention, and rehabilitation of cardiovascular disease. Students will learn to assess patient risk factors, interpret ECG recordings, and prescribe exercise to cardiac patients. This will provide the foundation for students to participate in community or hospital-based cardiac rehabilitation programs. Prerequisite: KIN 305. Recommended: KIN 110, 306, 310 and 342.

KIN 445-3 Advanced Cardiac Rehabilitation
Builds upon the knowledge and skills learned in KIN 444 through advanced ECG interpretation, exercise stress testing, and patient counseling. Students will be required to complete a 30 hour practicum within a community or hospital-based cardiac rehabilitation program. In addition, this course will introduce students to relevant research questions in cardiac rehabilitation and how this field is expanding and evolving. Prerequisite: KIN 444.

KIN 446-3 Neurological Disorders
Examines neural and neuromuscular diseases, including Alzheimer's disease, amyotrophic lateral sclerosis, multiple sclerosis, stroke, and myasthenia gravis. Emphasizes currently favoured hypotheses, underlying evidence and pathogenic mechanisms. Prerequisite: KIN 306. Recommended: KIN 336 and/or KIN 415.

KIN 448-3 Rehabilitation of Movement Control
This course is aimed at students interested in neuromuscular rehabilitation. Students will learn about the pathological origins of movement disorders associated with impaired function of sensory and motor systems. The course will be focused on the stages and strategies for recovery of voluntary control of essential functions. The range of rehabilitation interventions available to assist recovery and restore voluntary control is incorporated. The course places special emphasis on advanced techniques to restore control of movement and bodily functions in paralyzed people. Prerequisite: KIN 201, 207, 306.

KIN 451-3 Practicum III
The third semester of work experience for students in the Kinesiology Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: KIN 352. Work terms are graded as pass/fail (P/F).

KIN 452-3 Practicum IV
The fourth semester of work experience for students in the Kinesiology Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: KIN 451. Work terms are graded as pass/fail (P/F).

KIN 453-3 Practicum V
Optional semester of work experience for students in the Kinesiology Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: KIN 452. Work terms are graded as pass/fail (P/F).

KIN 461-3 Physiological Aspects of Aging
Designed for those who require a serious but fairly broad discussion of specific physiological aspects of aging. The overall emphasis is on humans and other mammalian species and the varieties of aging changes they manifest. Prerequisite: KIN 105 or 205, 142 and 90 credit hours.

KIN 467-3 Human Motor Control
The advanced study of human motor control, primarily from a behavioral perspective. Course content will include sections on Bernstein's approach to the problem of co-ordination and action, theories of action, studies of relatively recent empirical work in support of the theories. Prerequisite: KIN 205 and 207 or permission of instructor.

KIN 481-3 Musculoskeletal Disorders
Considers the prevalence, distribution, risk factors, mechanisms, management and prevention of disorders of muscle, connective tissue, joint, and bone. Covers tendinitis, bursitis, carpal tunnel syndrome and other overuse injuries from work and sport; whiplash-associated disorders, will be studied; osteoporosis; chronic pain; fibromyalgia. Prerequisite: KIN 201 and 326.

KIN 484-3 Altitude and Aerospace Physiology
The theme of this course is human physiology in environments of decreased atmospheric pressure, high G-force, and weightlessness. The course will deal with acute and chronic adaptations to these environments as well as life support systems and ‘countermeasures’ developed to expand the envelope of human performance. Developments of breathing apparatus and G-suits for space and military aircraft will be examined as they relate to solving the physiological problems of exposure to these environments. Effects of short and extended periods of weightlessness on cardiovascular, cerebrovascular, musculo-skeletal, neural, hormonal and vestibular systems will be explored. Prerequisite: KIN 305, 306. Recommended: KIN 407. Quantitative.

KIN 485-4 Human Factors in the Underwater Environment
The physiological effects of pressure on the human body and interfacings of humans and machine underwater are considered. Topics include the history of diving, decompression theory, decompression disorders, pulmonary function, underwater work, underwater breathing apparatus, narcosis, saturation diving, high pressure nervous syndrome, and atmospheric diving suits. Prerequisite: KIN 305. Quantitative.

KIN 486-3 Human Factors in Industrial Design
Covers the role of human factors in the design process. Explains how human factors/ergonomics knowledge is incorporated into the design process in order to improve safety, comfort, usability and efficiency for consumer products and products used in the workplace. Biomechanical principles, concepts from human-computer interaction and basic human factors/ergonomics principles will be applied. An applied project will be undertaken by groups of students and will form a significant part of the course. This course is designed for students who are following the human factors/ergonomics stream of the undergraduate program. Prerequisite: KIN 180 and KIN 380 or 383.

KIN 488-3 Ergonomics Laboratory
A project based laboratory course that applies theoretical knowledge to industrial situations. Instruction will be provided in proposal development, evaluation techniques, and report writing. Students will complete projects in human-machine interaction, occupational ergonomics, and industrial design. Prerequisite: KIN 180, plus at least four of the following: KIN 380, 381, 382, 383, 481, 486 and CHMS 354.

KIN 496-3 Directed Study I
Directed reading and literature research on topics selected in consultation with the supervising instructor. This course may not be repeated for
additional credit. A short proposal of the project, approved by the course supervisor, must be submitted for approval to the chair of the undergraduate program committee by the end of the first week of classes of the semester. Prerequisite: Permission from the chair of the undergraduate program committee. Usually, upper level standing with at least 75 semester hours in the kinesiology program will be required. Honors students may count only one of either KIN 496 or KIN 498 towards their 27 upper division Kinesiology elective credits.

KIN 497-3 Undergraduate Honors Thesis Proposal
Supervised directed study and research leading to the development of a formal undergraduate thesis proposal for work to be conducted in KIN 499. The activity in KIN 497 may be augmented by other course work and a pilot study. In cases where an industrial/community partner is involved in the development of a project, the work need not be conducted at Simon Fraser University and may be completed external to SFU. Supervision of KIN 497 will be conducted by a suitable faculty member, but may be co-supervised by an industrial/community partner. Supervisor(s) must be approved by the undergraduate program committee. The plan of activities for each KIN 497 should be submitted to the chair of the undergraduate program committee for approval one month prior to the semester in which the course will be taken. Prerequisite: only students in the honors program for KIN 497; 90 credit hours, STAT 201, and permission of the chair of the undergraduate program committee.

KIN 498-3 Directed Study II
Directed study and research selected in consultation with the supervising instructor. A short proposal of the project approved by the course supervisor, must be submitted for approval to the chair of the undergraduate program committee by the end of the first week of classes of the semester. Prerequisite: STAT 201 and permission from the chair of the undergraduate program committee. Usually, upper level standing with at least 75 semester hours in the kinesiology program will be required. Honors students may count only one of either KIN 496 or KIN 498 towards their 27 upper division kinesiology elective credits.

KIN 499-12 Undergraduate Honors Thesis
A thesis based on research previously proposed in KIN 497. Formal approval of the research topic is given by attaining a minimum grade of B in KIN 497. Regulations regarding the locale of the work, supervision and other arrangements, follow those for KIN 497. The written thesis should be submitted to the chair of the undergraduate program committee by the last day of exams of the semester. The thesis will also be presented orally as a seminar in an open forum at the end of the semester. Prerequisite: KIN 497. Only students in the honors program may register for KIN 499. A student may register for one other course concurrently with KIN 499 with permission from the faculty supervisor for KIN 499.

KIN 801-3 Seminar on Research in Kinesiology
Required of all graduate students entering kinesiology. Students will gain perspective on how their research fits into the overall spectrum of departmental research. Presentations will be given by faculty and students, to be followed by seminar discussions. Students will be exposed to techniques available in the school, their strengths and weaknesses, what data the techniques yield, and how the scientific method is applied in interpreting the data. Students will learn how to give oral, poster, and web-based presentations, and how to facilitate discussions. Students with credit for this course when taught as KIN 808 may not take KIN 801 for additional credit.

KIN 802-3 Statistical Applications in Kinesiology Research
A lecture-lab structured course, with one lecture per week and numerous non-scheduled lab assignments. Mini-exams are held every three weeks to monitor students' progress and assist students in keeping up with course materials. It will review fundamentals of descriptive statistics and hypothesis-testing. The remainder of the course will concentrate on analysis of variance and co-variance and an overview of correlation and regression. Students with credit for this course when taught as KIN 807 may not take KIN 802 for additional credit.

KIN 804-3 Project
Required for MSc (course work) students only. The course provides an opportunity for concentrated research in a focused area with a faculty supervisor resulting in a research paper or experimental report.

KIN 805-3 Directed Studies
An opportunity to develop with a faculty supervisor considerable depth of knowledge and expertise in a focused area of study. Normally, KIN 805 may not be taken for credit more than once and may not be taken for credit by MSc (course work) students.

KIN 806-808-3 Special Topics
Special topics in areas not currently covered within the graduate program offerings. The course may be offered as a lecture or a seminar course.

KIN 809-1.5 Project Completion
MSc Course Work students who do not complete KIN 804 in one semester must register in this course in all subsequent semesters until the project is completed. No additional credit will be given for this course.

KIN 810-3 Integrative Muscle Physiology
Recent developments in the application of molecular biology, biochemistry and cell biology to study muscle function during exercise. Topics will include muscle-specific gene expression, energy metabolism and its control, biochemical plasticity of muscle, hypertrophy and signal transduction.

KIN 811-3 Special Topics — Anatomy
KIN 812-3 Molecular and Cellular Cardiology
This course involves biochemical and biophysical analyses of cardiac function. Topics for discussion include excitation, contraction, E-C coupling and the regulation of pH. Prerequisite: introductory biochemistry and biophysics.

KIN 821-3 Environmental and Exercise Physiology
Review course covering aspects of cardiovascular and respiratory physiology and discussion of environmental physiological topics such as thermoregulation.

KIN 825-3 Motor Learning and Control
Selected aspects of research and theory in the behavioural neurosciences. The focus will be on delineating the problems of developing viable theories of motor learning and action, and on seeking solutions to those problems. The course also includes sections on information processing and co-ordination of complex movement.

KIN 826-3 Motor Control: a Behavioral Perspective
The study of selected aspects of research in motor behavior. The focus will be on delineating the problems of a viable theory of action, and on seeking solutions to the problems. Prerequisite: KIN 467, or equivalent.

KIN 835-3 Neuromuscular Disorders
Provides a broad understanding to the student as to the way nervous system disease is believed to occur, some of the mechanisms behind these processes, the ways that are used to study these mechanisms and the ability to think about these processes as expressed in a critique of a research paper. It will include discussions of ALS, Alzheimer’s disease, stroke and myasthenia gravis among others. Students with credit for this course when taught as KIN 806 may not take KIN 835 for additional credit.

KIN 840-3 Human Biomechanics
Review the theoretical basis and control of biomechanics and to examine how biomechanics research can contribute to our understanding of the cause, prevention and treatment of disease and injury and how biomechanics relates to neural control of movement. Topics will include static equilibrium, equations of motion, stability, inverse and forward dynamics, vibration and impact, mechanical properties of tissues, muscle models, feedback and feedforward control, impedance control and internal dynamics models.

KIN 850-3 Control Systems in Health and Disease
Biomolecular interactions exert or initiate substantive control thereby integrating cellular and physiological function. Defects in these biomolecular interactions frequently lead to altered control systems or responses of these systems in various disease states. Topics may include mechanisms of hormone action, cellular transport and signaling, immunoregulation, nutrition and metabolic control.

KIN 851-3 Recent Advances in Experimental Carcinogenesis
This class will integrate current knowledge on the process of carcinogenesis in tissues in which cancer commonly occurs in North America. Discussions will focus on new techniques being developed to identify individuals at risk for cancer and new approaches being used to intervene to prevent development of the disease. Prerequisite: KIN 431.

KIN 861-3 Neuroscience
Topics include the physiology of walking, cerebral and cerebellar cortical physiology, the generation of repetitive neural discharges, as well as hormonal control of neuron behaviour. The emphasis will be a broad introduction to neuroscience, as well as some neuroscience research methods and applications.

KIN 865-3 Neural Control of Movement
The course covers the peripheral nervous system including reflexes and spinal cord organization in detail. This prepares the student with a thorough understanding of general functioning of the nervous system. In addition, the course covers the neurophysiology of the cerebellum, motor cortex, basal ganglia, vestibular system and other related structures involved in central control of movement. Laboratory demonstrations are part of the course.

KIN 870-3 Modeling of Physiological Systems
Introduction to the basic principles of mathematical modeling of physiological systems and mathematical techniques that are commonly used in modeling. The course will provide students with an opportunity to learn and apply some of these techniques and to develop an appreciation for the utility of mathematical models, as well as limitations and potential pitfalls.

KIN 880-3 Internal Biomechanics
To relate the laws of mechanics to the function and structure of tissues and systems of the human body. Emphasis will be in relation to internal events occurring in normal and abnormal human states. Prerequisite: KIN 402.

KIN 885-3 Seminar on Human-Machine Systems
A study of the principles involved in integrating human capabilities into complex machine systems.

KIN 890-3 Engineering Aspects of Human Function
The application of engineering principles to the study of normal and abnormal human function.

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LANG 222-3 Latin III
Continues the work of HUM 162 Latin II. Focuses on reading classical Latin at an intermediate level, using mainly stories from Roman mythology. Prerequisite: HUM 162 or permission of the instructor. Students who have taken LANG 222 Intermediate Language Study I – Latin III may not take this course for further credit.

LANG 224-3 Western Secwepemcstin Immersion I
The development of fluent language skills in a world language not separately designated in the Calendar. The specific course number and credit hours assigned will vary with the language studied as well as the focus and method of instruction. Prerequisite: LANG 150-199 in the same language, or placement on the basis of prior knowledge. Please inquire at the Language Training Institute for information on placement.

LANG 248-3 Intermediate Xaad-kil Haida I
The development of fluent language skills in a world language not separately designated in the Calendar. The specific course number and credit hours assigned will vary with the language studied as well as the focus and method of instruction.

LANG 270-2 Ancient Greek IV
Continues the work of LANG 220 Ancient Greek III, focuses on reading Ancient Greek at an intermediate level. Prerequisite: LANG 220 Ancient Greek III. Students who have taken LANG 270 Intermediate Ancient Greek II may not take this course for further credit.

LANG 272-3 Latin IV
Continues the work of LANG 222 Latin III. Focuses on reading classical Latin at a more advanced intermediate level. Prerequisite: please see instructor or inquire at the Language Training Institute for information on placement. Students who have taken LANG 272 Intermediate Language Study II – Latin may not take this course for further credit. Variable credit hours 1, 2, 3, 4, 5.

LANG 298-3 Advanced Xaad-Kil Haida I
This course will provide practical listening and speaking skills, as well as literacy and analytic skills in a variety of advanced structures of Xaad Kli, the Haida Language, including the following: Word order in sentences, Haida shape classifiers as part of the verb complex, Instrumental prefixes, Modal and tense suffixes, Locative and directional postpositions, Applying linguistic structures in descriptive phrases and narrative (stories). In addition to understanding and using the linguistic structures, students in this course will prepare some simple lessons that teach these concepts, and will teach them to beginning students, with the support of elders/fluent speakers. Prerequisite: LANG 231, 232, 331, 332 and LANG 248, or permission of instructor.

Latin American Development Studies LAS
Faculty of Arts and Social Sciences

LAS 200-3 Introduction to Latin American Development Studies
A multidisciplinary introduction to contemporary Latin America. The course is organized in three modules: people and the land, the human condition, and the political alternatives, each of which will be examined from the varying perspectives of history, geography, politics, the arts, etc. Students who have taken LAS 200 as Introduction to Latin American Issues cannot take this course for further credit. Breadth-Social Sciences.

LAS 300-3 Latin American Literature
A study in English of significant contributions to Latin American literature. Breadth-Humanities.

LAS 312-3 Special Topics: Latin American Cultural Topics
A cross-disciplinary focus on specific elements of contemporary Latin American culture. Topics such as indigenism, Afro-Latin culture, religion, literature, and folklore will be studied. Prerequisite: LAS 140 or 200.

LAS 380-3 Practicum I
First semester of work experience in the Latin American Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 30 semester hours with a minimum CGPA of 2.75, including recommended courses LAS 100, 140, 200 and SPAN 102. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the second week of the semester preceding the employment semester.

LAS 390-3 Practicum II
Second semester of work experience in the Latin American Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: completion of LAS 380 and 45 semester hours with a minimum CGPA of 2.75. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the second week of the semester preceding the employment semester.

LAS 402-5 Field Study
A multidisciplinary study of a selected country or region. This course will normally be part of the LAS Field School in Latin America, and will be conducted in co-operation with local lecturers from the host country. Prerequisite: LAS 200.

LAS 404-3 Special Topics: Field School I
This course will be part of the LAS field school in Latin America. The selected region will be examined on site from a multidisciplinary perspective. Prerequisite: LAS 200 or permission of the department.

LAS 480-3 Practicum III
Second semester of work experience in the Latin American Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: completion of LAS 390 and 60 semester hours with a minimum CGPA of 2.75. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the second week of the semester preceding the employment semester.

LAS 490-3 Practicum IV
Fourth semester of work experience in the Latin American Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: completion of LAS 480 and 75 semester hours with a minimum CGPA of 2.75. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the second week of the semester preceding the employment semester.

LAS 493-3 Directed Readings
Provides opportunity for individual reading and research under the supervision of a faculty member. Prerequisite: 90 credit hours including LAS 200 and permission of the program advisor.

LAS 498-5 Capstone Project
Independent reading and research under the supervision of a LAS associated faculty member. A research paper or term paper will be the culmination of a LAS joint major. Prerequisite: 90 credit hours, including LAS 200 and permission of the program advisor. Students who have taken LAS 498-5 prior to fall 2006 may take this course for further credit.
LAS 800-4 Approaches to Research in Latin American Studies
Provides an introduction to choosing a methodological framework for conducting the MA research project. Topics include epistemology of the human sciences, social research design and a review of qualitative, quantitative and mixed research methods. Students will gain experience in writing research proposals for external funding early in the semester.

LAS 815-4 Theories of Latin American Development
A synthetic introduction to historical and contemporary theories of development in Latin America. Topics include political economy of development, sociological theories of development, an introduction to neoliberalism, and the contemporary experience of globalization and development in Latin America.

LAS 825-4 Latin American History and Culture
A general overview of social and political change in Latin America, including revolutions, independence, transition to democracy, and contemporary social movements. Theoretical approaches may include social-movement theory, democratic theory, etc.

LAS 851-5 Directed Readings in Latin American Studies
Directed readings in a selected field of study under the direction of a single faculty member. An annotated bibliography and a term paper is required.

LAS 898-6 MA Thesis

Liberal Arts LBRL
Faculty of Arts and Social Sciences

LBRL 101-3 Practicum I
First semester of work experience in the Liberal Arts Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: at least 30 semester hours with a minimum CGPA of 3.0, including ENGL 099 and PHIL 001. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

LBRL 201-3 Practicum II
Second semester of work experience in the Liberal Arts Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of Liberal Arts 101 and at least 45 semester hours with a minimum CGPA of 3.0. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

LBRL 301-3 Practicum III
Third semester of work experience in the Liberal Arts Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of LBRL 201 and at least 60 semester hours with a minimum CGPA of 3.0. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

LBRL 401-3 Practicum IV
Fourth semester of work experience in the Liberal Arts Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of Liberal Arts 301 and at least 75 semester hours with a minimum CGPA of 3.0. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

LBRL 402-3 Practicum V
Optional forth semester of work experience in the Liberal Arts Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of LBRL 401 and at least 90 semester hours with a minimum CGPA of 3.0. Students should apply to the Faculty of Arts co-op co-ordinators by the end of the third week of the semester preceding the employment semester.

LBRL 750-9 Practicum I
First semester of work experience in the Co-operative Education Program.

LBRL 751-9 Practicum II
Second semester of work experience in the Co-operative Education Program.

LBRL 752-9 Practicum III
Third (optional) semester of work experience in the Co-operative Education Program.

Liberal Studies LS
Faculty of Arts and Social Sciences

LS 800-5 Thinking About Human Passion
The first of two core courses that constitute an extended examination of the tension between reason and passion in human experience. This course will emphasize close reading and discussion of works, drawn from different cultures and epochs, that reflect on human passion.

LS 801-5 The Capacity of Limits of Reason
The second of two core courses that constitute an extended examination of the tension between reason and passion in human experience. This course will examine writings by some who have insisted on the indispensability of reasoning as a guide to action and the source of truth, as well as writings by some of those who on various grounds have cast doubt on this faith in human reason.

LS 810-5 Self and Society
This course will examine some aspects of the relationship between the individual and as idea and experience, and social organization. Approaches to the topic will vary, but may involve scientific, social scientific, philosophical and aesthetic perspectives.

LS 811-5 Tradition and Modernity
This course will examine ways in which ideas of tradition and modern societies conflict with forces of modernization and ideas of modernity.

LS 812-5 Science and Human Values
This course will deal with issues surrounding the nature of the scientific attitude, the growth of scientific knowledge and the impact of scientific and technological change. Specific attention will be given to the value implications of science and technology in relation to other forms of human understanding and experience.

LS 813-5 Religious and Secular World Views
This course will deal with the conflicts and continuities of secular and religious approaches to such fundamental issues as the origins of the universe and of the human species, human virtue, and human destiny.

LS 814-5 Liberty and Authority
This course will examine the tension between liberty and authority as expressed in some of the following: political and judicial ideas and systems; conflicting economic ideologies; personal relationships.

LS 815-5 Organizing Social Realities: Gender, Class, Race, Nation
This course will examine how distinctions among people create pattern and conflict, by studying some of the theories that include epistemology of society which both unite and divide people.

LS 819-5 Selected Topics
This course provides an opportunity for the occasional offering of a seminar course appropriate to the program but on a topic outside the regular courses.

LS 829-5 Directed Study
This course provides an opportunity for individual study on a topic of the student's choice, under the guidance of one or more faculty. Arrangements for this course must be approved by the graduate chair in advance of registration.

LS 888-5 Liberal Studies Graduating Seminar
The final seminar for those students in the graduate liberal studies program pursuing the course option MA. The seminar will revisit the themes raised in the two opening core seminars (LS 800 and 801).

LS 990-2.5 Extended Essays (Completion)
LS 991-2.5 MA Project (Completion)
LS 998-5 MA Extended Essays
Students will present two of their essays for formal examination in order to satisfy the Simon Fraser University requirements for a master's degree.

LS 999-5 MA Project
This course is for students choosing to satisfy part of the requirements for an MA in liberal studies by presenting a project for formal examination.

Linguistics LING
Faculty of Arts and Social Sciences

LING 100-3 Communication and Language
A non-theoretical approach to the study of language using examples from a variety of languages, Breath-Social Sciences.

LING 110-3 The Wonder of Words
Study of the structure of words, the change of meaning of words, the change in form of words. Examples from English, French and other languages. A general interest course open to all students.

LING 130-3 Practical Phonetics
Practical training in the description of sounds used in language. Students in the First Nations Studies program should take LING 231 before LING 130.

LING 200-3 Introduction to the Description of English Grammar
A practical overview of English grammar based on linguistic principles, for those designing basic knowledge of language structure, grammatical categories and grammatical analysis. This course is particularly suited for students interested in the teaching of English as a second language.

LING 220-3 Introduction to Linguistics
An introduction to linguistic analysis. Students with credit for LING 240 may not take this course for further credit.

LING 221-3 Introduction to Phonology
The principles of phonological analysis. Prerequisite: LING 130, 220.

LING 222-3 Introduction to Syntax
The principles of syntactic analysis. Prerequisite: LING 220.

LING 231-3 Introduction to First Nations Language I
An introductory course in the structure of a native language of the Americas, including phonetics, vocabulary, word formation, and grammatical constructions. The course will be based on a
designated language to be named each time it is taught, and will usually be chosen from the Northwest Coast area. Students who have taken LING 431 in semester 90-3 may not take this course for further credit. Recommended: students in the First Nations Studies program should take LING 231 before LING 331.

**LING 322-3 Syntax**
A course in the structure of a native language, including phonetics, vocabulary, word formation, and grammatical constructions. The course will be based on a designated language to be named each time it is taught, and will usually be chosen from the Northwest Coast area. Prerequisite: LING 231 in the same language. Students who have taken LING 432 in semester 91-1 may not take this course for further credit.

**LING 241-3 Languages of the World**
A survey of the languages of the world. An examination of the linguistic structure of selected languages. Prerequisite: LING 220.

**LING 260-3 Language, Culture and Society**
An introduction to language in its social and cultural dimensions.

**LING 301W-3 Linguistic Argumentation**
Advanced study of the styles of written argumentation that are used in linguistic research. Prerequisite: LING 222. Recommended: A lower division writing intensive (W) course. Writing.

**LING 309W-3 Sociolinguistics**
A systematic approach to the study of linguistic variation in different areas, social, and cultural settings. Prerequisite: LING 220 or 310, plus LING 301. Recommended: LING 260. Students who have taken LING 409 may not take this course for further credit. Writing.

**LING 321-3 Phonology**
An overview of theoretical principles in phonology. Prerequisite: LING 221 or 310.

**LING 322-3 Syntax**
The study of sentence structure in language through a survey of constructions found in natural language data together with a consideration of syntactic theory. Prerequisite: LING 222 or 310.

**LING 323-3 Morphology**
Word structure in natural languages and its relationship to phonological and syntactic levels of grammar. Prerequisite: LING 221, 222, or 310.

**LING 324-3 Semantics**
Basic formal aspects of meaning (e.g. compositional semantics, truth conditional semantics and quantification in natural language) and how they are distinguished from pragmatic aspects of meaning. Prerequisite: LING 222 or 310. Quantitative.

**LING 330-3 Phonetics**
A survey of methods of speech sound description and transcription. Prerequisite: LING 221 or 310.

**LING 331-3 Description and Analysis of a First Nations Language I**
An intermediate course in the structure of a native language of the Americas, including writing systems, texts and examination of the general linguistic properties of the language and the language family in which it is situated. The course will be based on a designated language to be named each time it is taught, and will usually be chosen from the Northwest Coast area. Prerequisite: LING 231 or equivalent credit in the same language.

**LING 332-3 Description and Analysis of a First Nations Language II**
A continuation of the intermediate course in a native language of the Americas, including writing systems, texts, and examination of the general linguistic properties of the language and the language family in which it is situated. The course will be based on a designated language to be named each time it is taught, and will usually be chosen from the Northwest Coast area. Prerequisite: LING 331 or equivalent credit in the same language.

**LING 333-3 Topics in First Nations Languages I**
Course content varies as required by First Nations language communities or learners. It will usually focus on having students gain insights into intermediate to advanced level topics on structural aspects of a particular First Nations language, with further emphasis on how those structural features of the languages can best be learned and taught in the classroom. Prerequisite: LING 130, 231, 332 or permission of instructor. Recommended: LING 360.

**LING 350-3 First Language Acquisition**
Introduction to the study of language acquisition from the point of view of linguistic structure. Prerequisite: LING 130, 220; or LING 310. Students who have taken LING 250 may not take this course for further credit.

**LING 360-3 Linguistics and Language Teaching**
Theoretical and practical aspects of second language learning. Prerequisite: LING 130, 220; or 310.

**LING 362-3 English as a Second Language: Theory**
Application of linguistic principles to the teaching of English as a second language. Prerequisite: LING 130, 222; or 310.

**LING 363-3 English as a Second Language: Practice**
Implementation of linguistic principles in the teaching of English as a second language, including a practical experience with learners of English. Prerequisite: LING 360, 362. This course is graded on a pass/fail basis.

**LING 370-3 Linguistics Practicum I**
First semester of work experience in the Linguistics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: normally 30 credit hours, including LING 130 and 220 and three other courses in Linguistics, with a minimum CGPA of 2.75.

**LING 371-3 Linguistics Practicum II**
Second semester of work experience in the Linguistics Co-operative Education Program. Credits from this course do not count towards the credits for an SFU degree. Prerequisite: successful completion of LING 370 and 45 credit hours with a minimum CGPA of 2.75.

**LING 400-3 Formal Linguistics**
Formal systems and their relation to linguistic methods and theory. Topics include the mathematical properties of natural languages, and rigorously defined frameworks for linguistic analysis and their formal properties. Prerequisite: LING 322. Recommended: PHIL 210 Quantitative.

**LING 401-3 Topics in Phonetics**
Advanced training in speech sound description and analysis in the impressionistic and instrumental modes. Prerequisite: LING 330.

**LING 403-3 Topics in Phonology**
Detailed study of specific areas in phonological research, such as particular languages and particular theories. Prerequisite: LING 321.

**LING 405-3 Topics in Syntax**
In-depth investigation of theoretical frameworks for syntactic description of natural languages. Prerequisite: LING 322, plus LING 301.

**LING 406-3 Topics in Semantics**
Additional topics in formal semantics, such as intensionality, lambda abstraction, generalized quantifiers, dynamic semantics. Prerequisite: LING 322, 324, plus LING 301. Recommended: PHIL 210. Quantitative.

**LING 407-3 Historical Linguistics**
The development of languages and language families through time; genetic grouping, the comparative method, reconstruction, etymology, universals and language change. Prerequisite: LING 321, 322 and 331, plus LING 301.

**LING 408-3 Field Linguistics**
The investigation and description of an unfamiliar language. Prerequisite: LING 221 and 322; or 310.

**LING 423-3 Topics in Morphology**
Principles of morphological theory and a survey of current research on word structure. Prerequisite: LING 321, 322, 323.

**LING 430-3 Native American Languages**
Structural and genetic characteristics of Native languages of America, with special emphasis on languages of the Northwest. Detailed examination of one language or language family. Prerequisite: 12 upper division linguistics credits. Recommended: LING 241 and 323.

**LING 431-3 Language Structures I**
Detailed examination of the structure of a selected language. Prerequisite: LING 221 and 322; or 310.

**LING 432-3 Language Structures II**
Detailed examination of the structure of a selected language. Prerequisite: LING 221 and 322; or 310.

**LING 433-3 First Nations Language Mentoring I**
Intended for advanced learners of a particular First Nations language. It will enable them to get advanced vocabulary and/or grammatical skills in the First Nations language through individualized practice with fluent speakers (usually elders) of that language. Enrollment in this course requires the prior approval of the Department of Linguistics and the local First Nations community. Students will be evaluated on the basis of the individualized goals and objects set at the beginning of the course. Prerequisite: LING 332 or permission of course supervisor. This course is graded on a pass/fail basis.

**LING 434-3 First Nations Language Mentoring II**
A follow up to LING 433. It will involve students, on an individualized basis, carrying out 39 hours of learning with a mentor, who is a fluent speaker (usually First Nations elder) or a particular First Nations language. Prerequisite: LING 433 or permission of course supervisor. This course is graded on a pass/fail basis. Recommended: LING 431 and 432.

**LING 435-3 Topics in First Nations Language II**
Course content varies as required by First Nations language communities or learners. It will usually focus on having students gain insights into intermediate to advanced level topics on structural aspects of a particular First Nations language, with further emphasis on how those structural features of the languages can best be learned and taught in the classroom. Prerequisite: LING 220, 332 or permission of instructor. Recommended: LING 360, 431 and 432.

**LING 441-3 Linguistic Universals and Typology**
A survey of the main language types found in the world with reference to their structural properties; the categorization of language types as a consequence of linguistic universals. Prerequisite: Two of LING 321, 322 or 323. Recommended: LING 241.

**LING 470-3 Linguistics Practicum III**
Third semester of work experience in the Linguistics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of LING 371 and 60 credit hours with a minimum CGPA of 2.75.
LING 471-3 Linguistics Practicum IV
Fourth semester of work experience in the Linguistics Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of LING 470 and 75 credit hours with a minimum CGPA of 2.75.

LING 480-3 Topics in Linguistics I
Investigation of a selected area of linguistic research. Prerequisite: LING 321 or 330, plus 9 credit hours of upper division linguistic courses.

LING 481-3 Topics in Linguistics II
Investigation of a selected area of linguistic research. Prerequisite: LING 360 plus either 9 credit hours of upper division linguistics courses or permission of the instructor.

LING 482W-3 Topics in Linguistics III
Investigation of a selected area of linguistic research. The course will be writing-intensive. Prerequisite: 12 credit hours of upper division linguistic courses. Note: may be taken without LING 480 or LING 481. Writing.

LING 490-3 Honors Essay
Topic of a specific nature to be agreed upon by the student and a particular faculty member. Prerequisite: a minimum of 35 hours of upper division linguistic courses counting toward the honors degree.

LING 800-4 Phonology
LING 801-4 Syntax
LING 802-4 Semantics
LING 803-4 Theory
LING 804-4 Field Methods
LING 805-4 Historical and Comparative Linguistics
LING 806-4 Sociolinguistics
LING 807-4 Computational Linguistics
LING 809-4 Morphology
LING 810-4 Topics in Linguistics I
LING 811-4 Topics in Linguistics II
LING 812-4 Topics in Linguistics III
LING 813-4 Topics in Linguistics IV
LING 820-4 Formal Linguistics
LING 821-4 Phonetics
LING 850-4 Psycholinguistic Aspects of Language Learning
LING 851-4 Research Techniques and Experimental Design
LING 855-4 Applied Linguistics I
LING 890-3 Graduate Seminar
LING 896-4 Directed Research
LING 897-4 Research Seminar
LING 898-6 MA Thesis
LING 899-6 PhD Thesis

Management and Technology
MTEC
Faculty of Applied Sciences
MTEC 601-1 Technology and Supply Chain Management
This course focuses on the evolution of customer relationship management from mortar and brick establishments to the Web. Focus is on issues of e-loyalty and customer services, as well as current practices.

MTEC 610-1 The Social Context of E-Business
The human element on the Web is important. In this course focus is on the development of trust in online communities, how virtual teams operate successfully, and ethical issues that impact online interaction, with particular emphasis on e-business.

MTEC 611-1 Knowledge Management Tools and Technologies
This course investigates the various information systems and technologies used for implementing knowledge management practices within an organization. It describes a framework for analyzing these knowledge services (KSS). Industry examples of knowledge services are discussed in terms of infrastructure services, core services and packaged services.

MTEC 603-1 Branding
This course focuses on the ways that brands acquire and sustain value in the marketplace. Students study the meaning, uses, processes, and methodologies for creating effective and winning brands. The evolution of brand value strategies is also explored.

MTEC 604-1 Internet Advertising
The focus is on the issues, theories, tools, and practice of marketing communications in the Internet marketplace and the role of Internet advertising to businesses. Students study the analytical skills that are needed to plan, design, implement and evaluate internet advertising campaigns.

MTEC 605-1 Management of High Tech Professionals
The course is focused on how to develop competitive advantage in e-business through leadership and the effective management of people. Topics examined include corporate culture, change management, learning organizations, and various human resource practices.

MTEC 606-1 Global Business in Technology Industries
The course is focused on key issues in conducting international business. Students study strategy formulation for international markets, as well as the important role of national culture in business. In addition, strategic alliances in technology companies are examined.

MTEC 607-1 Strategic Management of Innovation
This course reviews some fundamental concepts of strategy in the context of technological innovation, examines the role of core competencies in technology development, and identifies and discusses the various components or dimensions that make up a technology strategy. Case studies are used to illustrate theory with application in the e-business context.

MTEC 608-1 High Tech Entrepreneurship
In today's age of rapid technological progress, ventures are being created daily to satisfy new business needs. The creation of new technology-based ventures is becoming a more popular career choice for science and technology professionals with entrepreneurial ambition. This is a fast-paced, hands-on course that takes the student through the key stages of new venture creation including researching the product opportunity, protecting the venture's intellectual property, planning the venture's seed and start-up stages, determining the financial needs and resources, developing the business plan and valuing the venture.

MTEC 609-1 E-Customer Relationship Management
The course is focused on the evolution of customer relationship management from mortar and brick establishments to the Web. Focus is on issues of e-loyalty and customer services, as well as current practices.

MTEC 610-1 The Social Context of E-Business
The human element on the Web is important. In this course focus is on the development of trust in online communities, how virtual teams operate successfully, and ethical issues that impact online interaction, with particular emphasis on e-business.

MTEC 611-1 Knowledge Management Tools and Technologies
This course investigates the various information systems and technologies used for implementing knowledge management practices within an organization. It describes a framework for analyzing these knowledge services (KSS). Industry examples of knowledge services are discussed in terms of infrastructure services, core services and packaged services.

MTEC 613-1 E-Business Strategy and Models
Effective strategy is central to e-business success. In this course, emphasis is on examination on various strategies and models as they apply in e-business. Issues, strategic choices and challenges are highlighted related to e-business implementation.

MTEC 691-693-1 Directed Studies
MTEC 694-696-2 Directed Studies
MTEC 697-699-3 Directed Studies

Management and Systems Science
MSSC
Faculty of Science
MSSC 480-1 Undergraduate Seminar in Management and Systems Science
A seminar primarily for students undertaking a major or an honors program in management and systems science. Prerequisite: completion of all required lower division courses and at least 15 upper division credits required in the program, or permission of the program co-ordinator.

MSSC 481-1 Undergraduate Seminar in Management and Systems Science
A seminar primarily for students undertaking a major or an honors program in management and systems science. Prerequisite: completion of all required lower division courses and at least 15 upper division credits required in the program, or permission of the program co-ordinator.

Marine Science
MASC
Faculty of Science
MASC 400-6 Directed Studies
A course of directed studies under the supervision of a member of faculty. The study will involve a research project approved by the supervisor in the field of interest of the student, and will be designed to take maximum advantage of the laboratory and/or field opportunities offered by the Bamfield Marine Sciences Centre.

MASC 401-3 Directed Studies in Marine Sciences
A course of directed studies under the supervision of a member of faculty. The study will involve a research project approved by the supervisor in the field of interest of the student, and will be designed to take maximum advantage of the laboratory and field opportunities offered by the Marine Sciences Centre. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 410-6 Marine Invertebrate Zoology
A survey of the marine phyla, with emphasis on the benthic fauna in the vicinity of the Bamfield Marine Sciences Centre. The course includes lectures, laboratory periods, field collection, identification, and observation. Emphasis is placed on the study of living specimens in the laboratory and in the field. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details.
MASC 411-6 Comparative Embryology of Marine Invertebrates
A comprehensive study of development of marine invertebrates available at the Bamfield Marine Sciences Centre. Will include major phyla and most of the minor phyla. Lectures will cover gametogenesis, fertilization, regeneration, cell lineage, mosaic and regulated development, larval development and metamorphosis. Laboratory work will include methods and techniques of obtaining and handling gametes, preparation and maintenance of larval cultures and observation of development up to metamorphosis if possible. Some selected and clearly defined classical experiments will be performed. Efforts will also be made to study various pelagic larvae. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 412-6 Biology of Fishes
Classification, physiology, ecology, behavior and zoogeography of fishes with particular emphasis on those in the marine environment of the British Columbia coast. Local collections from a variety of habitats will be used for experimental studies. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 413-5 Structure and Function in Animals
The course will focus on the structure of marine animals and their adaptations to the marine environment. Developmental biology, functional morphology and other topics will be covered. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 425-3 Ecological Adaptations of Animals
A graduate level course of directed studies under the supervision of a member of faculty. The study will involve a research project approved by the supervisor in the field of interest of the student, and will be designed to take maximum advantage of the

details. The brochure will be available from the Department of Biological Sciences.

MASC 430-6 Marine Ecology
An analytical approach to biotic associations in the marine environment. Opportunities will be provided for study of the intertidal realm in exposed and protected areas and of beaches and estuaries in the vicinity of the Bamfield Marine Sciences Centre; plankton studies and investigations of the sub-tidal and benthic environments are envisaged. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 437-3 Marine Population Ecology and Dynamics
An analytical approach to the study of marine ecology and marine populations. Intertidal and subtidal communities will be examined, with emphasis on the biota of the Barkley Sound region. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 440-6 Biology of Marine Birds
The interrelationship of birds and the marine environment. Lectures will emphasize the systematics and ecological relationships, behavior, life histories, movements and conservation of marine birds. Census techniques and methods of studying marine birds in the field will be stressed during field trips in the Barkley Sound region. Seabird identification, classification, morphology, plumages and molt will be examined in the laboratory. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 445-6 Biology of Marine Mammals
A survey covering systematics and distribution of marine mammals, their sensory capabilities and physiology, with special emphasis on the cetaceas. The course includes lectures, laboratory periods and numerous field trips in the Barkley Sound region. The course will involve an independent field study. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 446-6 Comparative Ethology
A comparative study of marine animals (vertebrate and invertebrate) emphasizing behavioral description, underlying physiological mechanisms, the biological significance of behavior and behavioral evolution. The course will include independent laboratory and field studies. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 470-3 Special Topics in Marine Biology
Offered, as opportunities arise, by visiting scientists who are working at the Bamfield Marine Sciences Centre and are prepared to offer a course of either three or six weeks. Course will be of a specialized nature. Prerequisite: will vary and will be announced in advance of the course offering. Variable credit hours 3, 6.

MASC 471-472-6 Special Topics in Marine Biology
Offered, as opportunities arise, by visiting scientists who are working at the Bamfield Marine Sciences Centre and are prepared to offer a course of either three or six weeks. Courses will be of a specialized nature. Prerequisite: Will vary and will be announced in advance of the course offering.

MASC 474-477-6 Special Topics in Marine Biology
Offered, as opportunities arise, by visiting scientists who are working at the Bamfield Marine Sciences Centre and are prepared to offer a course of either three or six weeks. Courses will be of a specialized nature. Prerequisite: Will vary and will be announced in advance of the course offering.

MASC 478-3 Special Topics in Marine Biology
Offered, as opportunities arise, by visiting scientists who are working at the Bamfield Marine Sciences Centre and are prepared to offer a course of either three or six weeks. Courses will be of a specialized nature. Prerequisite: Will vary and will be announced in advance of the course offering.

MASC 480-3 Seminars and Papers in Marine Science
A series of weekly seminars covering current topics of interest in the Marine Sciences. Seminars will be presented Bamfield Marine Sciences Centre researchers, graduate students and visiting scientists as well as by the students themselves. Prerequisite: Offerings of the MASC courses may vary from summer to summer because instructors are drawn from different universities. For that reason, prerequisites may vary slightly. In general, upper division standing in biology is required, and admission is usually competitive. Students are encouraged to consult the brochure published each fall by the Bamfield Marine Sciences Centre for full and specific details. The brochure will be available from the Department of Biological Sciences.

MASC 500-3 Directed Studies
A graduate level course of directed studies under the supervision of a member of faculty. The study will involve a research project approved by the supervisor in the field of interest of the student, and will be designed to take maximum advantage of the
Master of Business Administration
MBA
Faculty of Business Administration

MBA 601-2.5 Data and Decision-Making
This course explores the application of quantitative methods to managerial decision-making. Topics will include data analysis and statistical description, sampling and statistical inference, and regression analysis. Case studies are used to help managers cope with decision-making in complex and uncertain circumstances.

MBA 602-2.5 The Global Business Environment
This course will examine the international context of business. Fundamental concepts in international finance, economics and business will be introduced and significant trends in the world economy will be analysed. Topics might include global trends in monetary and fiscal policy, exchange rate analysis, trends in international trade and investment, analysis of emerging markets, and strategic alliances. The human, cultural and ethical issues arising from doing business abroad will be discussed.

MBA 603-5 Structure and Change in Organizations
This course applies contemporary organizational theory to the managerial challenges of entrepreneurial, corporate, public sector and not-for-profit organizations in the areas of organizational structure and change, adapting the organizations to their changing environment, and articulating alternate plans for organizational survival (and where possible, growth).

MBA 604-5 Organizational Change and Development
An examination of the concepts, principles and assumptions of organization development.

MBA 606-5 Financial Management
Finance is the study of investments; these investments are made by firms in their operative activities and by persons in their financial portfolios.

MBA 607-5 Business Strategy
Analysis of strategic issues affecting the success of the total enterprise and business units. The course includes industry analysis, internal analysis of the firms' skills, resources and capabilities, corporate and business level strategies, the process of doing strategic analysis, the relationship between strategy and management, and the basic design of a plan of implementation for a strategic plan.

MBA 610-612-3 Directed Studies in Business Administration
Individual study with a faculty member. The course outline must be approved by the graduate program committee.

MBA 615-5 Marketing Management
An analysis of the strategic consideration of marketing management and their impact on the firm and its competitors.

MBA 621-5 Information Technology and Organizational Transformation
A seminar format will be used to discuss the concepts and frameworks essential to the effective management of information technology. Our focus will be on the strategic role that information systems play in organizations, their structure and components, and various perspectives on how to plan and manage this technology.

MBA 632-5 Operations Research
Quantitative methods to cope with problems of complexity, uncertainty, and lack of information in organizational decision-making.

MBA 634-5 Business Forecasting
Modern forecasting methods applied to a variable of interest to the student and his employer. Students taking the course must have access to at least five years of monthly data or 12 years of quarterly data on the variable to be forecast. Generally, the paper written for this course will provide the basis for the MBA project.

MBA 651-5 Managerial Economics
The application of modern microeconomic theory to problems of managerial decision-making. The importance of both economic models and quantitative applications are explained. Topics include demand, cost and productivity analysis; the analysis of market structure and firm strategy; international competition and trade; organizational economics; and the analysis of risk, uncertainty and information.

MBA 660-5 Special Topics in Business Administration
Course content varies from semester to semester. Specific course outlines and bibliographies must receive prior approval of the graduate program committee.

MBA 662-663-5 Special Topics in Business Administration
Course content varies from semester to semester. Specific course outlines and bibliographies must receive prior approval of the graduate program committee.

MBA 670-5 Financial and Managerial Accounting
Analysis of financial statements and their role in evaluation of the firm, and of internal financial information and its function in planning, control and performance evaluation.

MBA 681-5 Organizational Leadership and Interpersonal Behavior
Interpersonal relations and group dynamics in organizational life. Development of perceptual and communication skills in small groups. Leadership theory and work group behavior.

MBA 688-5 Industrial Relations
Collective bargaining, the collective agreement, work stoppages, arbitration and the legal environment.

MBA 695-5 Methods of Research
Methods and aims of business research and how it contributes to effective management.

MBA 696-5 Applied Strategic Analysis
Students will undertake a strategic firm analysis or public policy analysis (public sector students). Students may undertake other types of projects with permission of the executive MBA director. The project is submitted to the library. Prerequisite: MBA 607, 691.

MBA 698-5 Directed Studies in Business Administration
Individual study with a faculty member. The course outline must be approved by the graduate program committee.

MBA 699-5 Research Project
Execution of research project under faculty supervision. No formal classes.

MBA 895-4 Selected Topics in Business

Mathematics MATH
Faculty of Science

MATH 100-3 Precalculus
Designed to prepare students for first year Calculus courses. Topics include language and notation of mathematics; problem solving; algebraic, exponential, logarithmic and trigonometric functions and their graphs. Prerequisite: BC principles of mathematics 11 (or equivalent) with a grade of at least B-. Students with credit for MATH 110 may not take MATH 100 for further credit. MATH 100 may not be counted towards the mathematics minor, major or honors degree requirements. Those with BC Math 12 or equivalent, with a grade of at least B, may not take this course for credit. Quantitative.

MATH 113-3 Euclidean Geometry
Plane Euclidean geometry, congruence and similarity. Theory of parallels. Polygonal areas. Pythagorean theorem. Geometrical constructions. Prerequisite: BC principles of mathematics 11 (or equivalent) with a grade of at least B-. Intended to be accessible to students who are not specializing in mathematics. Particularly recommended for students considering a career in teaching secondary or middle school mathematics. Quantitative.

MATH 121-3 Mathematical Expeditions
Mathematics beyond calculus; exploration of mathematical ideas which have led to the creation of new branches of mathematics with important applications, and a look at some of the great unsolved problems of mathematics. Euclid’s parallel postulate and non-Euclidean geometries; set theory and paradoxes of the infinite; number theory and Fermat’s last theorem; graph theory; analysis; and a look at the famous “Millennium Problems”. Prerequisite: Either BC principles of mathematics 12 (or equivalent) or BC applications of mathematics 12, or MATH 100 with a grade of at least C-. Quantitative.

MATH 130-3 Geometry for Computer Graphics
An introductory course in the application of geometry and linear algebra principles to computer graphical representation. Vector and matrix algebra, two and three dimensional transformations, homogeneous coordinates, perspective geometry. Prerequisite: Principles of Mathematics 12 or Applications of Mathematics 12. Quantitative.

MATH 150-4 Calculus I with Review
Designed for students specializing in mathematics, physics, chemistry, computing science and engineering. Topics as for MATH 151 with a more extensive review of functions, their properties and their graphs. Recommended for students with no previous knowledge of Calculus. In addition to regularly scheduled lectures, students registered in this course are encouraged to come for assistance to
the Calculus Workshop (Burnaby), or Math Open Lab (Surrey). Prerequisite: BC principles of mathematics 12 (or equivalent) with a grade of at least B or MATH 100 with a grade of at least C-. Students with credit for either MATH 150, 151, 154 or 157 may not take MATH 150 for further credit. Quantitative.

MATH 151-3 Calculus I
Designed for students specializing in mathematics, physics, chemistry, computing science and engineering. Logarithmic and exponential functions, trigonometric functions, limits, continuity, and derivatives. Techniques of differentiation, including logarithmic and implicit differentiation. The Mean Value Theorem. Applications of Differentiation including extrema, curve sketching, related rates, Newton's method. Antiderivatives and applications. Conic sections, polar coordinates, parametric curves. Prerequisite: BC principles of mathematics 12 (or equivalent) with a grade of at least B-, or MATH 100 with a grade of at least C-. Students with credit for either MATH 150, 151 or 154 may not take MATH 151 for further credit. Quantitative.

MATH 152-3 Calculus II
Riemann sum, Fundamental Theorem of Calculus, definite, indefinite and improper integrals, approximate integration, integration techniques, applications of integration. First-order separable differential equations. Sequences and series, series tests, power series, convergence and applications of power series. Complex numbers. Prerequisite: MATH 150, 151 or 154. Students may also use MATH 157 with a grade of at least B. Students with credit for MATH 155 or 158 may not take MATH 152 for further credit. Quantitative.

MATH 154-3 Calculus I for the Biological Sciences
Designed for students specializing in the biological and medical sciences. Topics include: limits, growth rate and the derivative; logarithmic, exponential and trigonometric functions and their applications in population study; optimization and approximation methods. Prerequisite: BC principles of mathematics 12 (or equivalent) with a grade of at least B, or MATH 100 with a grade of at least C-. Students with credit for either MATH 150, 151 or 157 may not take MATH 154 for further credit. Quantitative.

MATH 155-3 Calculus II for the Biological Sciences
The integral and its applications, partial derivatives, differential equations and their applications in ecology, mathematical models of biological processes. Prerequisite: MATH 150, 151 or 154; or MATH 157 with a grade of at least B. Students with credit for MATH 152 or 158 may not take MATH 155 for further credit. Quantitative.

MATH 157-3 Calculus for the Social Sciences I
Designed for students specializing in business or the social sciences. Topics include: limits, growth rate and the derivative; logarithmic and exponential and trigonometric functions and their application to business, economics, optimization and approximation methods; functions of several variables. Prerequisite: BC principles of mathematics 12 (or equivalent) with a grade of at least B; or MATH 100 with a grade of at least C-. Students with credit for either MATH 150, 151 or 154 may not take MATH 157 for further credit. Quantitative.

MATH 158-3 Calculus for the Social Sciences II
Theory of integration and its applications; introduction to multivariable calculus with emphasis on partial derivatives and their applications; introduction to differential equations with emphasis on some special first-order equations and their applications to economics and social sciences; continuous probability models; sequences and series. Prerequisite: MATH 150 or 151 or 154 or 157. Students with credit for MATH 152 or 155 may not take MATH 158 for further credit. Quantitative.

MATH 160-3 Mathematics in Action
Students take an active role in modeling mathematics of change through a guided, investigative, discovery-based approach of learning that mimics past and present research methods in mathematics. The course is divided into several modules, each of which centers around a major application in mathematics such as logistic growth (e.g. spread of diseases), optimization (e.g. cost effective oil pipe line routes), approximation (e.g. security system design), area calculation (e.g. tile design) and volume calculation (e.g. optimal ice cream cone) as well as a function review module and calculus history module. The history module allows students to gain a broad understanding of the developments of calculus and how this branch of mathematics helped to shape other branches of mathematics as well as the sciences. The instructional approach emphasizes conceptual understanding over rote drill and student write, present, and defend their mathematical discoveries. Prerequisite: Either BC principles of mathematics 12 (or equivalent) or MATH 152, or MATH 100 with a grade of at least C-. Quantitative/Breadth-Science.

MATH 160W-3 Mathematics in Action
Students take an active role in modeling mathematics of change through a guided, investigative, discovery-based approach of learning that mimics past and present research methods in mathematics. The course is divided into several modules, each of which centers around a major application in mathematics such as logistic growth (e.g. spread of diseases), optimization (e.g. cost effective oil pipe line routes), approximation (e.g. security system design), area calculation (e.g. tile design) and volume calculation (e.g. optimal ice cream cone) as well as a function review module and calculus history module. The history module allows students to gain a broad understanding of the developments of calculus and how this branch of mathematics helped to shape other branches of mathematics as well as the sciences. The instructional approach emphasizes conceptual understanding over rote drill and student write, present, and defend their mathematical discoveries. Prerequisite: Either BC principles of mathematics 12 (or equivalent) or BC applications of mathematics 12, or MATH 100 with a grade of at least C-. Writing/Quantitative/Breadth-Science.

MATH 178-3 Fractals and Chaos
Introduction to fractal geometry and chaos theory, with a survey of applications of these topics in modern mathematics and in other areas outside of mathematics including music, art, computer graphics, finance, and the sciences. Designed to be accessible to students with only high school mathematics. Prerequisite: BC principles of mathematics 12 (or equivalent), or MATH 100 with a grade of at least C-. Writing/Quantitative/Breadth-Science.

MATH 178W-3 Fractals and Chaos
Introduction to fractal geometry and chaos theory, with a survey of applications of these topics in modern mathematics and in other areas outside of mathematics including music, art, computer graphics, finance, and the sciences. Designed to be accessible to students with only high school mathematics. Prerequisite: BC principles of mathematics 12 (or equivalent), or MATH 100 with a grade of at least C-. Writing/Quantitative/Breadth-Science.

MATH 190-4 Principles of Mathematics for Teachers
Mathematical ideas involved in number systems and geometry in the elementary school curriculum. Overview of the historical development of these ideas, and their place in contemporary mathematics. Language and notation of mathematics; problem solving; whole number, fractional number, and rational number systems. Plane geometry, solid geometry, metric geometry, and the geometry of the motion. Introduction to probability and statistics. Prerequisite: BC principles of mathematics 11 (or equivalent) with a grade of at least B-. This course may not be counted toward the Mathematics minor or honors degree requirements. Students who have taken, have received transfer credit for, or are currently taking MATH 150, 151, 154 or 157 may not take MATH 190 for credit without permission from the Department of Mathematics. This course may not be particularly accessible to students who are not specializing in mathematics. Quantitative.

MATH 197-3 Hitchhiker's Guide to Everyday Math
Should you buy a ticket for 6/49 or Super 7? If you tested positive for a rare disease, what is the chance that you actually do have it? What are likely to be the consequences of moving to a single transferrable vote voting system from a “first past the post” voting system? What is the connection between Chinese dragging noodles, E. coli in your credit card? These are some of the questions we will be investigating in this course. We will also look into the use, misuse and abuse of mathematics in the media and advertisements. Prerequisite: BC principles of mathematics 11 (or equivalent). This course may not be counted toward the Mathematics minor, major or honors degree requirements. Quantitative.

MATH 198-4 Introduction to Quantitative Reasoning
Designed specifically for students in the Integrated Studies programs to help them develop their abilities to interpret and reason with quantitative information. Topics covered include logical reasoning and problem solving, counting and probability, mathematics of finance, and linear and exponential modeling. Prerequisite: BC Principles of Mathematics 11 (or equivalent) with a grade of at least C, taken within the past 10 years, or completion of the Preparatory Mathematics Workshop for the Integrated Studies programs. This course is only open for credit to students in the Integrated Studies programs within the Bachelor of General Studies degree. Quantitative.

MATH 210-3 Calculus for Design Sciences
This course is designed for students specializing in arts and design technology. Topics include theory of integration and its applications; introduction to first- and second-order differential equations and their applications to signals and systems; Laplace integral transform and introduction to Fourier integral transform as effective tools to analyze and design multimedia systems. Prerequisite: MATH 151; Students with credit for TECH 147, ITEC 274, ITEC 276, MATH 152, MATH 155, and MATH 158 may not take this course for further credit. Quantitative.

MATH 232-3 Applied Linear Algebra
Linear equations, matrices, determinants. Introduction to vector spaces and linear transformations and bases. Inner products and orthogonality. Eigenvalues and eigenvectors; diagonalization. Inner products and orthogonality: least squares problems. Applications. The course emphasizes matrix and vector calculations and applications. Prerequisite: MATH 150 or 151 (or equivalent) or MACM 101 or MATH 154/157 with a grade of at least B. Students with credit for MATH 240 cannot take MATH 232 for further credit. Quantitative.

MATH 240-3 Algebra I: Linear Algebra
Linear equations, matrices, determinants. Real and abstract vector spaces, subspaces and linear
Applications to operations research, model fitting, and investigating the minimum of a function of several real variables. Method. Duality theory and applications. Integer Programming and solving optimization problems involving integer variables. Prerequisite: MATH 252 or 232.

MATH 323-3 Complex Variables
Functions of a complex variable, differentiation, contour integrals, Cauchy’s theorem, Taylor and Laurent expansions, method of residues. Prerequisite: MATH 251. Students with credit for MATH 422 may not take MATH 323 for further credit. Quantitative.

MATH 336-3 Job Practicum I
This is the first semester of work experience in a co-operative education program available to mathematics students. Interested students should contact the co-op co-ordinator at least one, preferably two, semesters in advance. This course will be graded on a pass/withdraw basis. A course fee is required.

MATH 337-3 Job Practicum II
This is the second semester of work experience in a co-operative education program available to mathematics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: MATH 336 and permission of the co-op co-ordinator at least one, preferably two, semesters in advance. This course will be graded on a pass/withdraw basis. A course fee is required.

MATH 342-3 Elementary Number Theory
Divisibility of primes, congruences, arithmetic functions and related topics. Prerequisite: MATH 240 or 232, and one additional 200 level MATH or MACM course. Quantitative.

MATH 343-3 Applied Discrete Mathematics
Structures and algorithms, generating elementary combinatorial objects, counting (integer partitions, set partitions, Catalan families), backtracking algorithms, branch and bound, heuristic search algorithms. Prerequisite: MATH 201 (with a grade of at least B-). Recommended: knowledge of a programming language. Quantitative.

MATH 345-3 Introduction to Graph Theory
Fundamental concepts, trees and distances, matchings and factors, connectivity and paths, network flows, integral flows. Prerequisite: MATH 201 (with a grade of at least B-). Quantitative.

MATH 348-3 Probabilistic Models in Operations Research
Inventory theory, Markov decision process and applications, queuing theory, forecasting models, decision Analysis and games, probabilistic dynamic programming, simulation modeling, project planning using PERT/CPM, sequencing and scheduling. Prerequisite: STAT 270, MATH 308. Quantitative.

MATH 370-3 The Art and Craft of Problem Solving
Designed for students with a strong interest in problem solving and the determination to persevere in seeking solutions to highly challenging mathematical problems. Emphasis is placed on clarity of exposition and persuasiveness of written argument, and on development of communication skills. Prerequisite: MACM 201 with a grade of at least B. At least one of MACM 201, MACM 202, MATH 240, MATH 242, MATH 251 or MATH 252 with a grade of at least A, or permission of instructor. Quantitative.

MATH 370w-3 The Art and Craft of Problem Solving
Designed for students with a strong interest in problem solving and the determination to persevere in seeking solutions to highly challenging mathematical problems. Emphasis is placed on clarity of exposition and persuasiveness of written argument, and on development of communication skills. Prerequisite: MACM 201 with a grade of at least B. At least one of MACM 201, MACM 202, MATH 240, MATH 242, MATH 251 or MATH 252 with a grade of at least A, or permission of instructor. Quantitative.

MATH 380-3 History of Mathematics
An account of the history of mathematics from ancient times through the development of calculus and the origins of modern algebra in the nineteenth century. Emphasis will be on developments which shaped the mathematics studied in high school and the first two years of high school.
years of university. Prerequisite: MATH 151 (or equivalent) and at least 45 credit hours. Students who have taken MATH 180 may not take MATH 380 for additional credit. Intended to be particularly accessible to students who are not specializing in mathematics. Quantitative.

MATH 380W-3 History of Mathematics
An account of the history of mathematics from ancient times through the development of calculus and the origins of modern algebra in the nineteenth century. Emphasis is on developments which shaped the mathematics studied in high school and the first two years of university. Prerequisite: MATH 151 (or equivalent) and at least 45 credit hours. Students who have taken MATH 180 may not take MATH 380 for additional credit. Intended to be particularly accessible to students who are not specializing in mathematics. Writing/Quantitative.

MATH 398-3 Selected Topics in Mathematics
Topics in areas of mathematics not covered in the regular undergraduate curriculum of the department. Prerequisites will be specified according to the particular topic or topics offered.

MATH 402-4 Industrial Mathematics Project
Applications of mathematical methods to industrial problems. Emphasis will be placed on the mathematical formulation of problems arising in an industrial context. Topics will be drawn from many areas, including (but not limited to): coding theory, continuum mechanics, optimal control and signal processing. Students will choose problems to work and present their solutions in the form of a written report, poster or oral presentation. Prerequisite: MATH 202, 216, MATH 251, 308, 310; STAT 283. Quantitative.

MATH 408-3 Discrete Optimization
Model building using integer variables, computer solution, relaxations and lower bounds, heuristics and upper bounds, branch and bound algorithms, cutting-plane algorithms, valid inequalities and facets, branch and cut algorithms, Lagrangian duality, column generation of algorithms, heuristics algorithms and analysis. Prerequisite: MATH 308, 343. Recommended: MATH 345.

MATH 418-3 Partial Differential Equations

MATH 419-3 Linear Analysis
Convergence in Euclidean spaces, Fourier series and their convergence, Legendre polynomials, Hermite and Laguerre polynomials. Prerequisite: MATH 240 (or MATH 232 with a grade of at least B+) and MATH 320. Recommended: MATH 252. Quantitative.

MATH 424-3 Complex Analysis
Conformal mapping, Cauchy Integral Formula, Analytic Continuation, Riemann Mapping Theorem. Argument Principle. Prerequisite: MATH 320 and either MATH 322 or 254, or permission of the instructor. Quantitative.

MATH 425-3 Real Analysis
Metric spaces, normed vector spaces, measure and integration, an introduction to functional analysis. Prerequisite: MATH 320 and 350. Quantitative.

MATH 433-3 Job Practicum III
This is the third semester of work experience in a co-operative education program available to mathematics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: MATH 337 and permission of the co-op co-ordinator; students must apply at least one semester in advance. This course will be graded on a pass/withdraw basis. A course fee is required.

MATH 437-3 Job Practicum IV
This is the fourth semester of work experience in a co-operative education program available to mathematics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: MATH 436 and permission of the co-op co-ordinator; students must apply at least one semester in advance.

MATH 491-2 Honors Essay
Selected topics. Prerequisite: written permission of the department undergraduate studies committee.

MATH 492-494-4 Directed Studies
Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: written permission of the department undergraduate studies committee.

MATH 495-3 Selected Topics in Applied Mathematics
The topics included in this course will vary from semester to semester depending on faculty availability and student interest. Prerequisite: will be specified according to the particular topic or topics offered under this course number.

MATH 496-3 Selected Topics in Mathematics
The topics included in this course will vary from semester to semester depending on faculty availability and student interest. Prerequisite: will be specified according to the particular topic or topics offered under these course numbers.

MATH 497-3 Directed Studies
Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: written permission of the department undergraduate studies committee.

MATH 601-4 Discovering Mathematics I
Arithmetic and Geometry form the core of the elementary school curriculum. The fundamental concepts in both these areas of mathematics will be approached through exploratory exercises and problems as well as in projects. The students will work both singly and in groups to explore the ideas of mathematics. The presentations will be non-theoretical. Prerequisite: acceptance into the master’s program in mathematics education or permission of the department. Graduate students in Department of Mathematics cannot take this course to satisfy their degree requirements.

MATH 602-4 Discovering Mathematics II
Discrete mathematics is used in many areas such as communications, scheduling and transportation problems. Statistics is encountered by each of us every day in the newspapers and on television as medical findings, sporting results and economic strategies are discussed. These are two of the most accessible areas of modern applied mathematics and many problems and the ideas behind their solution can be understood and appreciated by students with only a modest mathematical background. Several topics in these areas and their relationship to real world problems will be explored. The exploration will be done through a series of projects with students often working in teams and making presentations of their discoveries. The presentation will be non-theoretical. Prerequisite: MATH 601 and acceptance into the master’s program in mathematics education or permission of the department. Graduate students in Department of Mathematics cannot take this course to satisfy their degree requirements.

MATH 603-4 Fundamentals of Mathematics
Crisis in mathematics, their historical and philosophical background and their resolution. Prerequisite: acceptance into the MSc program in mathematics education or permission of the department. Graduate students in the Department of Mathematics cannot take this course to satisfy their degree requirements.
MATH 604-4 Geometry
Euclidean and non-Euclidean geometries. Klein’s Erlangen program. Prerequisite: entrance into the MSc in mathematics education program or permission of the department. Graduate students in the Department of Mathematics cannot take this course to satisfy their degree requirements.

MATH 605-4 Mathematics in Context
Mathematical modeling in the largest sense with a focus on topics and issues related to doing and discovering mathematics, including explorations of available computational resources, e.g., Maple. Prerequisite: acceptance into the MSc program in mathematics education and one year of university level calculus. Graduate students in the Department of Mathematics cannot take this course to satisfy their degree requirements.

MATH 701-4 Computer Algebra
Data-structures and algorithms for mathematical objects, including polynomials, general mathematical formulae, long integer arithmetic, polynomial greatest common divisors, the Risch integration algorithm. Other topics include symbolic differentiation, simplification of formulae, and polynomial factorization. Students will learn Maple for use on assignments. Prerequisite: CMPT 307 or MATH 332. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 716-3 Numerical Analysis II
The numerical solution of ordinary differential equations and elliptic, hyperbolic and parabolic partial differential equations will be considered. Prerequisite: MATH 310 (or 352) and MATH 316. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 718-3 Partial Differential Equations
First-order linear equations, the method of characteristics. The wave equation, Harmonic functions, the maximum principle, Green’s functions. The heat equation. Distributions and transforms. Higher dimensional eigenvalue problems. An introduction to nonlinear equations. Burgers’ equation and shock waves. Prerequisite: MATH 314 (or PHYS 384), or permission of the department. Recommended: MATH 242 and 320. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 719-3 Linear Analysis
Convergence in Euclidean spaces, Fourier series and their convergence, Legendre polynomials, Hermite and Laguerre polynomials. Prerequisite: MATH 232, 320 or permission of the instructor. Recommended: MATH 252. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 724-3 Applications of Complex Analysis
Conformal mapping, application to boundary value problems, Schwarz-Christoffel transformation, integral formulae, analytic continuation, argument principle. Prerequisite: MATH 322. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 725-3 Real Analysis
Metric spaces, normed vector spaces, measure and integration, an introduction to functional analysis. Prerequisite: MATH 320. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 738-3 Linear Algebra
Linear Algebra. Vector space and matrix theory. Prerequisite: MATH 332 or 339 or permission of the instructor. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 739-3 Algebraic Systems
Algebraic systems including, for example, groups, rings, Polynomial theory. Prerequisite: MATH 332. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 740-3 Galois Theory
An introduction to the theory of fields, with emphasis on Galois theory. Prerequisite: MATH 332. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 743-3 Combinatorial Theory
Graph colouring, Hamiltonian graphs, planar graphs, random graphs, Ramsey theory, extremal problems, additional topics. Prerequisite: MATH 343 and MATH 332. Recommended: MATH 345. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 745-3 Graph Theory
Graph colouring, Hamiltonian graphs, planar graphs, random graphs, Ramsey theory, extremal problems, additional topics. Prerequisite: MATH 345. Recommended: MATH 343. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 747-4 Coding Theory
An introduction to the theory and practice of error-correcting codes. Topics will include finite fields, polynomial rings, linear and non-linear codes, BCH codes, convolutional codes, majority logic decoding, weight distribution of codes, and bounds on the size of codes. Prerequisite: MATH 232. Recommended: MATH 332. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 761-3 Continuous Mathematical Models
Formulation, analysis and numerical solution of continuous mathematical models. Applications may be selected from topics in physics, biology, engineering and economics. Prerequisite: MATH 314 and MATH 316. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 762-3 Fluid Dynamics
Incompressible fluid flow phenomena: kinematics and equations of motion, viscous flow and boundary layer theory, potential flow, water waves, Aerodynamics. Prerequisite: MATH 314 or PHYS 384, MATH 322. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 767-3 Dynamical Systems
Stability and bifurcation in vector fields and discrete maps. Centre manifold theory and applications of normal forms. Introduction to chaos, Lyapunov exponents, and normal hyperbolicity. Prerequisite: MATH 310. Recommended: MATH 320. Students may not take a 700 division course if it is being offered in conjunction with a 400 division course which they have taken previously.

MATH 804-4 Mathematics: Selected Topics
Selected Topics
A survey of graduate group and/or ring theory. Possible topics include generators and relations, composition series and modules, Sylow theory, permutation groups, abelian groups, p-groups, nilpotent and solvable groups, aspects of simple groups, representation theory, group algebras, character theory, Chevalley-Jacobson density theorem, Wedderburn-Artin theorems.

MATH 818-4 Algebra and Geometry
An introduction to algebraic geometry with supporting commutative algebra. Possible topics include Hilbert basis theorem, Hilbert’s Nullstellensatz, Groebner bases, ideal decomposition, local rings, dimension, tangent and cotangent spaces, differentials, varieties, morphisms, rational maps, non-singularity, intersections in projective space, cohomology theory, curves, surfaces, homological algebra.

MATH 819-4 Algebra: Selected Topics
MATH 820-4 Graph Theory
Algebraic graph theory, extremal graph theory, colouring problems, path and cycle structure of graphs, application of graphs, hypergraphs, and current research topics.

MATH 821-4 Combinatorics
An introduction to the theory of incidence structures (finite geometries, block designs) and their relation to linear codes. Algebraic techniques - finite group actions, orbit enumeration, generation of orbit representatives. Exact and asymptotic enumeration of labelled and unlabelled structures.

MATH 826-4 Posets and Matroids
An introduction to the theory of posets, geometric lattices and matroids.

MATH 827-4 Discrete Mathematics: Selected Topics
MATH 831-4 Real Analysis I
An intensive study of Lebesgue measure and integration and the Lebesgue convergence theorems together with the treatment of such topics as absolute continuity, the fundamental theorem of calculus, the Lp-spaces, comparison of types of convergence in function spaces, the Baire category theorem.

MATH 833-4 Analysis: Selected Topics
MATH 836-4 Complex Analysis II
Topics covered normally will include: Riemann surfaces, complex conjugate co-ordinates; the maximum principle, boundary value problems; conformal mappings, Schwarz-Christoffel formula; the symmetrization principle, analytic continuation.

MATH 841-4 Topology: Selected Topics
MATH 842-4 Algebraic Number Theory
Review of Galois theory, integrality, rings of integers, traces, norms, discriminants, ideals, Dedekind domains, class groups, unit groups, Minkowski theory, diophantine equations, Diophantine approximations, applications.

MATH 845-4 Number Theory: Selected Topics
MATH 877-1 Supplementary Reading
MATH 878-0 PhD Comprehensive Examination
A comprehensive written examination covering a broad range of senior undergraduate and graduate material.

MATH 879-0 PhD Thesis Proposal
An open oral defence of a written thesis proposal presented to the student’s supervisory committee.

MATH 880-6 MSc Project
A project leading to research in mathematics completed under the supervision of a faculty member. The project will consist of a written report and a public presentation. This course can only be used for credit towards the MSc project course option.

MATH 882-0 MSc Final Examination
A written examination covering senior undergraduate and basic graduate material.
MATH 890-0 Practicum I
First semester of work experience in a co-operative education program.

MATH 891-0 Practicum II
Second semester of work experience in a co-operative education program.

MATH 892-0 Practicum III
Third semester of work experience in the Co-operative Education Program. Prerequisite: MATH 891.

MATH 893-0 Practicum IV
Fourth semester of work experience in the Co-operative Education Program. Prerequisite: MATH 892.

MATH 894-2 Reading

MATH 895-4 Reading

MATH 896-2 Introductory Seminar

MATH 897-2 Advanced Seminar

MATH 898-6 MSc Thesis

MATH 899-6 PhD Thesis

Mathematics and Computing Science MACM

Faculties of Applied Sciences and Science

MACM 101-3 Discrete Mathematics I
Introduction to counting, induction, automata theory, formal reasoning, modular arithmetic. Prerequisite: BC high school mathematics 12. Entry into this course is obtained through the School of Computing Science. Quantitative/Breadth-Science.

MACM 201-3 Discrete Mathematics II
A continuation of MACM 101. Topics covered include graph theory, trees, inclusion-exclusion, generating functions, recurrence relations, and optimization and matching. Prerequisite: MACM 101. Quantitative.

MACM 202-4 Mathematical Modeling and Computation
A variety of continuous and discrete models such as difference equations, differential equations, networks, cellular automata, and fractals are introduced. Students will develop mathematical models for physical phenomena, and use the computer to simulate and analyze the models. A mathematical software package, such as Maple or Matlab, will be extensively used in a laboratory setting. Prerequisite: MATH 152 (or MATH 155 or 158), and CMPT 125 (or CMPT 101 or 104 or 126) and MATH 232 (co-requisite). Quantitative.

MACM 300-3 Introduction to Formal Languages and Automata with Applications
Languages, grammars, automata and their applications to natural and formal language processing. Prerequisite: MACM 201. Quantitative.

MACM 316-3 Numerical Analysis I
A presentation of the problems commonly arising in numerical analysis and scientific computing and the basic methods for their solutions. Prerequisite: MATH 152 or 155 or 158, and 232 and knowledge of a high level computer language such as FORTRAN, C, PASCAL or MODULA 2. Students with credit for MATH 406 or MATH 316 may not receive further credit for MACM 316. Quantitative.

MACM 401-3 Introduction to Computer Algebra
A first course in computer algebra also called symbolic computation. It covers data-structures and algorithms for mathematical objects, including polynomials, general mathematical formulae, long integer arithmetic, polynomial greatest common divisors, the Risch integration algorithm. Other topics include symbolic differentiation, simplification of formulae, and polynomial factorization. Students will learn Maple for use on assignments. Prerequisite: CMPT 307 or MATH 332 or MATH 340. Quantitative.

MACM 409-3 Numerical Linear Algebra and Optimization
Develops numerical methods for solving non-linear systems, finding the minimum of a function of several real variables, solving linear and non-linear least-squares problems, and computing eigenvalues and eigenvectors. Methods include Newton’s method, the conjugate Gradient algorithm, the singular value decomposition and QR factorization. Applications to continuous optimization, model fitting, and stability analysis. Prerequisite: MACM 202, MATH 251, MACM 316. Quantitative.

MACM 416-3 Numerical Analysis II
The numerical solution of ordinary differential equations and elliptic, hyperbolic and parabolic partial differential equations will be considered. Prerequisite: MATH 310 (or 352) and MACM 316. Students with credit for MATH 416 may not take MACM 416 for further credit. Quantitative.

MACM 442-3 Cryptography
An introduction to the subject of modern cryptography. Classical methods for cryptography and how to break them, the data encryption standard (DES), the advanced encryption standard (AES), the RSA and ElGamal public key cryptosystems, digital signatures, secure hash functions and pseudo-random number generation. Algorithms for computing with long integers including the use of probabilistic algorithms. Prerequisite: (CMPT 201 or 225) and one of (MATH 340 or 332 or 342); or CMPT 405. Cannot be repeated if taken MACM 498 1037-1061. Quantitative.

MACM 498-3 Special Topics in Mathematics and Computing Science
Topics will vary from semester to semester depending on faculty availability and student interest. Prerequisite: will be specified according to the particular topics offered under this course number.

Molecular Biology and Biochemistry MBB

Faculty of Science

MBB 151-3 Practicum I
First semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 151-3 Practicum II
Second semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 300-1 Special Topics in Biotechnology and Business
An overview of the legal, economic and social aspects of technology transfer in the areas of molecular biology, biochemistry, and biotechnology presented by a series of local experts. Topics will include patents, contracts, intellectual property, capitalization and others. The format will be a formal lecture followed by a workshop. Prerequisite: completion of the second year in the Molecular Biology and Biochemistry and Business Administration joint major or equivalent experience.

MBB 308-3 Molecular Biology and Biochemistry Lab I
Modern molecular biological and recombinant DNA methods such as DNA isolation, plasmid preparation, restriction enzyme digestion, Southern blots, cloning and polymerase chain reaction. Prerequisite: MBB 221 (or BICH 222), CHEM 281, and MBB 331-3 as a co- or pre-requisite (the latter is recommended). Students with credit for BISC 357, 431, BICH 311 or MBB 311 may not take MBB 308 for further credit.

MBB 309-4 Molecular Biology and Biochemistry Laboratory II
Contemporary techniques in biotechnology including protein purification, immunological methods, and lipid characterization. Prerequisite: CHEM 282, MBB 222. Recommended: CHEM 215 and CHEM 286 precede MBB 309. Note: CHEM 286 is not required in the MBB-BUS or MBB-CMPT joint major programs, but students in these programs are encouraged to take CHEM 286. Students with credit for MBB 312 or BICH 312 may not take MBB 309 for further credit.

MBB 309W-4 Molecular Biology and Biochemistry Laboratory II
Contemporary techniques in biotechnology including protein purification, immunological methods, and lipid characterization. Prerequisite: CHEM 282, MBB 222. Recommended: CHEM 215 and CHEM 286 precede MBB 309. Note: CHEM 286 is not required in the MBB-BUS or MBB-CMPT joint major programs, but students in these programs are encouraged to take CHEM 286. Students with credit for MBB 312 or BICH 312 may not take MBB 309 for further credit.

Writing.

MBB 310-3 Genes, Biotechnology, and Society
A Science Breadth course exploring current topics in Biotechnology and Genetic Engineering. Critical issues facing society will be examined from scientific, regulatory, and ethical points of view, with particular emphasis on acquiring enough of the scientific background to discuss and evaluate the issues. Prerequisite: 60 credit hours. This course is not open to majors in MBB or Biological Sciences. Breadth-Science.

MBB 321-3 Intermediary Metabolism
Major catabolic and anabolic pathways and their regulation. Particular emphasis is placed on bioenergetics and experimental methods encountered in biochemical research. Prerequisite: MBB 222 (or BICH 222) and CHEM 282 (or 250). Students with credit for BICH 321 may not take MBB 321 for further credit.

MBB 322-3 Molecular Biology and Biochemistry
An introduction to DNA replication and recombination, RNA transcription and protein synthesis in the context of their locations within the cell and their timing in the cell cycle. The relationship between structure and function of proteins and nucleic acids will be addressed. Prerequisite: MBB 221 (or BICH 221). Corequisite: CHEM 282 (or 250). Recommended: CHEM 282 precede MBB 222. Students with credit for BICH 222 may not take MBB 222 for further credit.

MBB 251-3 Practicum II
Second semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

Simon Fraser University 2007 - 2008 Calendar

COURSES
MBB 322-3 Introduction to Physical Biochemistry
Introduction to physical biochemistry including rigorous treatment of thermodynamics and molecular transport. Prerequisite: CHEM 360 with specific emphasis on biochemical and molecular biological processes.

MBB 331-3 Molecular Biology
The study of DNA and RNA in relation to gene structure and expression; DNA replication and the regulated expression of genes in bacteria and higher organisms. Introduction to recombinant DNA and cloning theory; natural vector structures and recombinant vector construction. Prerequisite: MBB 222, BISC 202. Students with credit for BISC 331 may not take this course for credit.

MBB 351-3 Practicum III
Third semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 402-3 Molecular and Developmental Genetics
Selected aspects of developmental biology with an emphasis on genetic and molecular analyses in model systems such as Drosophila, C. elegans and mice. The focus will be on signal transduction pathways and their regulation of developmental processes. Prerequisite: BISC 331 and MBB 331 (or BISC 331). Students with credit for BISC 402 may not take this course for credit.

MBB 403-3 Physical Biochemistry
The physical properties of biomacromolecules and their use in determining molecular weight and conformation; modern physical methods applied to biomolecules; properties and analysis of membrane systems. Prerequisite: MBB 321 (or BICH 321) and either MBB 323 or CHEM 360 (or 261). Recommended: MBB 413 (or BICH 413) should be taken concurrently. Students with credit for BICH 403 may not take MBB 403 for further credit.

MBB 412-4 Enzymology
Enzyme isolation and assay procedures; energy of activation; enzyme kinetics and inhibition; mechanisms of enzymatic reactions; allosteric enzymes. Prerequisite: MBB 321 (or BICH 321), either MBB 323 or CHEM 360 (or 261), and MBB 309. Students with credit for BICH 412 may not take MBB 412 for further credit.

MBB 413-2 Physical Biochemistry Laboratory
The measurement of physical properties of macromolecules; studies with bio-membranes. Prerequisite: MBB 309 (or 312) and 321 (or BICH 321) and either MBB 323 or CHEM 360. Students with credit for BICH 413 may not take MBB 413 for further credit.

MBB 420-3 Selected Topics in Contemporary Biochemistry
The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: will be announced before the start of the semester and will depend upon the nature of the topic offered.

MBB 421-3 Nucleic Acids
Recent literature is examined for insights into the structure and properties of DNA and RNA, drawing on a variety of biochemical, chemical and molecular biological perspectives. Prerequisite: MBB 331 (or BISC 331). Students with credit for BICH 421 may not take MBB 421 for further credit.

MBB 422-3 Biomembranes
A review of recent research on the structure, dynamics, function and biosynthesis of membranes, membrane lipids and proteins. Prerequisite: MBB 322 (or BICH 321 and 322) and either MBB 323 or CHEM 360. Students with credit for BICH 422 may not take MBB 422 for further credit.

MBB 423-3 Protein Structure and Function
Recent research in transition state theory; specificity in enzyme catalyzed reactions, the use of recombinant DNA techniques to describe and modify enzyme catalysis, the function of enzymes in organic solvents, and the development of new catalytic activities through monoclonal antibody techniques. Prerequisite: MBB 331 (or BISC 331) and either MBB 321 (or BICH 321) or MBB 322 (or BICH 322). Students with credit for BICH 423 may not take MBB 423 for further credit.

MBB 426-3 Immunology
This course aims at covering the field of immunology, with emphasis on the human immune system. The first half of the course covers topics explaining how immune recognition occurs, whereas the second half of the course covers topics involving disease states and the role the immune system plays in them (i.e. immune responses to infection, immunodeficiency, hypersensitivity reactions, autoimmunity and transplantation). Prerequisite: MBB 322 (or BICH 322) or consent of instructor. Students with credit for BICH 426 may not take MBB 426 for further credit. Students who have taken HSCL 325 or 425 cannot take MBB 426 for further credit.

MBB 430-3 Mechanisms of Secretory Transport
Analysis of mechanisms of protein, lipid, and nucleic acid delivery and transport within cells; processes of protein targeting, exocytosis, and endocytosis; molecular mechanisms of vesicle transport and membrane fusion; role in signal transduction and disease. Prerequisite: MBB 322 and BISC 331/MBB 331 or permission of the instructor.

MBB 432-3 Advanced Molecular Biology Techniques Laboratory with accompanying lectures designed to give practical experience in advanced contemporary molecular biology techniques. Lab exercises will include site-directed mutagenesis, preparation and characterization of GST-fusion proteins, construction of transgenes and their expression in transgenic organisms, and use of the yeast two-hybrid assay to study protein-protein interactions. Prerequisite: MBB 308 and 331, MBB 309 or permission of instructor.

MBB 435-3 Genome Biology
The analysis of entire genomes of organisms has only been possible since 1995. This new area of study will be examined in detail with emphasis on current research. Prerequisite: MBB 331 (or BISC 331). Students with credit for BICH 435 may not take MBB 435 for further credit.

MBB 436-3 Gene Expression
Lectures and student presentations will cover the wide range of ways in which organisms (primarily eukaryotes) regulate gene expression along the pathway from DNA to protein. Prerequisite: MBB 321, 322, and MBB 331 or BISC 331, or permission of instructor.

MBB 437-3 Selected Topics in Signal Transduction
Signal transduction, the conversion of an extracellular signal into a cellular response, is presently one of the most intensively studied aspects of biology. Signaling pathways control a wide range of cellular processes and the characterization of these pathways is having a major impact on cell biology, developmental biology, biotechnology and medicine. In this course, we shall be examining the current literature in this rapidly developing field. We will look at how a combination of biochemistry, cell biology and genetics is being used to investigate the diverse mechanisms used in cell signaling, and examine how the various approaches can be used to study one another. Classes will be in the form of lectures and student presentations. Prerequisite: MBB 321, MBB 322 and MBB 331 or BISC 331 or permission of the instructor.

MBB 438-3 Human Molecular Genetics
This course will describe recent advances in human molecular genetics. Topics will include genome analysis, gene therapy, genetic testing, and studies of genetic disorders. Prerequisite: MBB 331 (or BISC 331).

MBB 440-3 Selected Topics in Contemporary Molecular Biology
The topics in this course will vary from semester to semester, depending on faculty availability and student interest. Prerequisite: will depend upon the nature of the topic offered. Corequisite: will depend upon the nature of the topic offered.

MBB 441-3 Bioinformatics
Lectures and hands-on instruction at the computer in the use of, and theory behind, bioinformatic software and algorithms for the analysis of macromolecular data. Prerequisite: MBB 331 (or BISC 331), and an introductory computer science course (e.g. CMPT 110 or 120), or equivalent.

MBB 442-3 Proteomics
Proteomics concerns the analysis of the entire complement of proteins expressed by an organism. This course will consider protein sequence alignment, sequence database scanning, classification of protein structures, prediction of protein structure and function, and evolution of protein function. Prerequisite: MBB 321 (or BICH 321) and MBB 322 (or BICH 322); one introductory computer course (e.g. CMPT 102 or 120).

MBB 443-3 Protein Biogenesis and Degradation
A consideration of protein biogenesis (folding, assembly, and targeting to cellular compartments), modification, and degradation, and their roles in protein and cellular function. Prerequisite: MBB 321 (or BICH 321) and MBB 322 (or BICH 322); or permission of the instructor.

MBB 444-3 Developmental Neurobiology
Examination of recent literature on neuronal growth cones and axonal guidance. Cell cultural, biochemical, and molecular genetic approaches will be emphasized in assessing guidance cues. Prerequisite: BISC 331/MBB 331 and BISC 333, or permission of the instructor.

MBB 451-3 Practicum IV
Fourth semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 452-3 Practicum V
Fifth semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 490-2 Directed Study in Advanced Topics in Molecular Biology and Biochemistry
Directed reading in a topic of molecular biology or biochemistry chosen in consultation with a supervisor. Before seeking approval for registration in this course, the student should have already obtained the agreement of a faculty member that he/she is willing to supervise the project, and have prepared a
written proposal (of approximately one page) stating the nature of the directed reading topic. The course will include the preparation of a written term paper on the topic chosen. Prerequisite: MBB 222 (or BICH 222) and permission of the molecular biology and biochemistry department. Usually, upper level standing with at least 60 semester hours in a Biochemistry major, minor or honors program will be required. Students with credit for BICH 490 may not take MBB 490 for further credit.

MBB 491-5 Undergraduate Research Part-time laboratory research in an area of molecular biology or biochemistry for preparation of a thesis in molecular biology and biochemistry. Before seeking approval for registration in this course, the student should already have obtained the agreement of a Simon Fraser University faculty member that he/she is willing to supervise the project, and have prepared a written proposal (of approximately 1-2 pages) stating the nature of the research project. The course will include the preparation of a written research report on the results of the project, and may also, at the discretion of the supervisor, include an oral presentation of the results. Prerequisite: MBB 222 (or BICH 222) and permission of the molecular biology and biochemistry department. Usually, upper level standing with at least 60 semester hours in a molecular biology and biochemistry major, minor or honors program will be required. Students with credit for BICH 491 may not take MBB 491 for further credit.

MBB 492-10 Individual Study Semester (Option A) Full-time laboratory research in an area of molecular biology or biochemistry for preparation for a thesis on the honors degree in molecular biology and biochemistry. This course is available to honors students who have already taken MBB 491 (or BICH 491-5), or who plan to break an individual studies project into two semesters (see below). The course will include the preparation of a comprehensive written research report on the results of the project, and may also, at the discretion of the supervisor, include an oral presentation of the results. Prerequisite: permission of the department. Students with credit for BICH 492 may not take MBB 492 for further credit.

MBB 493-15 Individual Study Semester (Option B) Full-time laboratory research in an area of molecular biology or biochemistry for preparation for a thesis for the honors degree in molecular biology and biochemistry. This course is available to honors students who have already taken an undergraduate research course and wish to complete an individual studies project in one semester. The course will include the preparation of a comprehensive written research report on the results of the project, and may also, at the discretion of the supervisor, include an oral presentation of the results. Prerequisite: permission of the department. Students with credit for BICH 493 may not take MBB 493 for further credit.

MBB 496-6 Joint Honors Undergraduate Directed Readings and Research Directed reading and part-time scientific research in an area of molecular biology or biochemistry. This course is intended only for those students taking a joint MBB/BUS or MBB/CS honors degree. Before seeking approval for registration in this course, the student should already have obtained the agreement of a faculty member that he/she is willing to supervise the project, and have prepared a written proposal (of approximately 1-2 pages) stating the nature of the research project and project. The course will include preparation of a written report on the results of the project, and may, at the discretion of the supervisor, include an oral presentation of the results.

Prerequisite: 75 credit hours and upper division standing in an MBB joint honors program, and MBB 308. Students who take MBB 496 are not allowed to take MBB 491, 492 or 493 with the same faculty supervisor.

MBB 505-3 Problem Based Learning in Bioinformatics The problem-based learning course will develop students’ ability to exchange ideas in small groups focused on real but simplified problems in bioinformatics. Problems will be carefully selected to cover multiple areas of bioinformatics research. This is an advanced bioinformatics course that assumes the student has previous bioinformatics training. Prerequisite: MBB 441 or equivalent bioinformatics course (undergraduate or graduate). This course is identical to CMPT 505 and students cannot take both courses for credit.

MBB 506-3 Critical Research Analysis Advanced seminar series for bioinformatics. Prerequisites: enrolment in Graduate Diploma in Bioinformatics. This course is identical to CMPT 506 and students cannot take both courses for credit.

MBB 611-6 Research Rotation I One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisite: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to CMPT 611 and students cannot receive credit for both courses.

MBB 612-6 Research Rotation II One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisite: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to CMPT 612 and students cannot receive credit for both courses.

MBB 613-6 Research Rotation III One semester of original bioinformatics research conducted in the lab of a designated mentor. Students are required to write their results in a scientific journal format and defend these results before a panel consisting of the project mentor plus two other qualified faculty members. Prerequisites: Enrolment in Graduate Diploma in Biotechnology. This course is identical to CMPT 613 and students cannot receive credit for both courses.

MBB 659-3 Special Topics in Bioinformatics Consideration of recent research literature on contemporary topics in bioinformatics. Prerequisites: MBB 441 or 441; or CMPT 341 or 881.

MBB 669-3 Special Topics in Genomics Consideration of recent research literature on contemporary topics in genomics. Prerequisites: MBB 435 or 835.

MBB 679-3 Special Topics in Proteomics Consideration of recent research literature on contemporary topics in proteomics. Prerequisites: MBB 442 or 842.

MBB 721-3 Nucleic Acids An examination of recent literature about the structure and function of DNA and RNA.

MBB 722-3 Biological Membranes A review of recent literature on the structure, dynamics, function and biosynthesis of membrane lipids and proteins.

MBB 723-3 Protein Structure and Function Transition state theory; specificity in enzyme catalyzed reactions; use of recombinant DNA techniques to describe and modify enzyme catalysis, catalytic activities through monoclonal antibody techniques.

MBB 730-3 Mechanisms of Secretory Transport Analysis of mechanisms of protein, lipid, and nucleic acid delivery and transport within cells. The course will examine processes of protein targeting, exocytosis, and endocytosis; molecular mechanisms of COP- and clathrin-mediated vesicle transport; and regulation of these processes. Prerequisites: PERMISSION OF THE INSTRUCTOR. Lectures will present landmark experiments from classic papers, and student presentations will focus on recent research articles. The significance of these findings with respect to human disease and signal transduction will be considered. Prerequisite: MBB 322 and BISC 331/MBB 331 or permission of the instructor.

MBB 736-3 Gene Expression A consideration of the mechanisms and regulation of gene expression in eukaryotes and prokaryotes.

MBB 737-3 Molecular Genetics of Signal Transduction Consideration of recent literature dealing with mechanisms of signal transduction. The emphasis of the course varies from semester to semester. Past offerings have ranged from a specific focus on studying signaling using molecular genetics in model organisms, to an examination of recent developments in biological, biochemical, and genetic approaches being used in current signal transduction research.

MBB 738-3 Human Molecular Genetics This course will consider recent advances in human molecular genetics. Topics will include genome analysis, genetic testing, and studies of genetic disorders. Prerequisite: MBB 331 (or BISC 331) or equivalent.

MBB 741-3 Bioinformatics An overview of the newly emerging field of bioinformatics, which is loosely defined as the intersection between the fields of molecular biology and computer science. A combination of lecture format and hands-on instruction is provided in the use of, and theory behind, bioinformatic software tools used in genomic and computational biology research. An introduction to the development of bioinformatic software is included, though only basic computer science knowledge is required for this particular course. Prerequisite: one introductory computer programming course (e.g. CMPT 102, 110, 120 or equivalent).

MBB 742-3 Proteomics Since the completion of the human genome, the next step is to understand the function of these genes. Proteomics cover the integration of a number of topics with the aim of analyzing the complete complement of proteins expressed by a biological system. This course will give a general understanding of the proteome, describe many of the different aspects of proteomics that have been developed recently, identify the technologic limitations related to proteomics, and will also include likely future directions for the field. Prerequisite: one introductory computer programming course (e.g. CMPT 102, 103, 110, 120 or equivalent).

MBB 743-3 Protein Biogenesis, Function and Degradation The central dogma of molecular biology (DNA to RNA to protein) underscores two fundamental biological processes, transcription and translation, that are essential to life. Protein biogenesis (folding, assembly, targeting to the proper cellular compartment), protein modification, and protein degradation represent three other equally important cellular activities. The emphasis in this course will be to review the literature on protein biogenesis, function, and degradation, and...
explore the new and exciting developments that are just starting to uncover how mechanistically complex these processes are.

**MBB 744-3 Developmental Neurobiology**
The course will examine recent literature on neuronal growth cones and axonal guidance. Cell cultural, biochemical, and molecular genetic approaches will be emphasized in assessing the roles and functions of guidance cues. Prerequisite: BISC 331 and BISC 333 or equivalent and permission of the instructor.

**MBB 843-3 Student Seminar in Molecular Biology and Biochemistry I**
Discussion of recent literature through student seminars and written reports. Introduction to professional skills for scientific careers.

**MBB 802-3 Student Seminar in Molecular Biology and Biochemistry II**
Discussion of recent literature through student seminars and written reports. Introduction to professional skills for scientific careers. Prerequisite: MBB 801 or an MSc degree.

**MBB 806-3 PhD Graduate Research Seminar**
Oral presentation and defense of a written PhD research proposal. Students will be examined on their progress and grasp of knowledge relevant to the proposed research and their capacity to complete the proposed thesis research. Open only to students in the PhD molecular biology and biochemistry graduate program.

**MBB 811-1 Techniques in Molecular Biology and Biochemistry**
Consideration of methods applied to research in molecular, cellular, and developmental biology; genetics; and biochemistry. Can be repeated with permission of the instructor.

**MBB 812-2 Techniques in Molecular Biology and Biochemistry**
Consideration of methods applied to research in molecular, cellular, and developmental biology; genetics; and biochemistry. Can be repeated with permission of the instructor.

**MBB 813-3 Techniques in Molecular Biology and Biochemistry**
Consideration of methods applied to research in molecular, cellular, and developmental biology; genetics; and biochemistry. Can be repeated with permission of the instructor.

**MBB 821-1 Cell and Molecular Biology Colloquium**
Recent research articles on the molecular mechanisms underlying cellular activities will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts and experimental design and methods. Prerequisite: BISC 331/MBB 331 or equivalent. Students who have taken BISC 821, 822 or 823 may not receive credit for this course. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including BISC 821, 822, 823.

**MBB 822-1 Cell and Molecular Biology Colloquium**
Recent research articles on the molecular mechanisms underlying cellular activities will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts and experimental design and methods. Prerequisite: BISC 331/MBB 331 or equivalent. Students who have taken BISC 821, 822 or 823 may not receive credit for this course. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including BISC 821, 822, 823.

**MBB 823-1 Cell and Molecular Biology Colloquium**
Recent research articles on the molecular mechanisms underlying cellular activities will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts and experimental design and methods. Prerequisite: BISC 331/MBB 331 or equivalent. Students who have taken BISC 821, 822 or 823 may not receive credit for this course. A student may not take more than 3 credits of Cell and Molecular Biology Colloquium courses, including BISC 821, 822, 823.

**MBB 824-3 Physical Biochemistry**
The physical properties of biomacromolecules; modern physical methods applied to biomolecules; properties and analysis of membrane systems.

**MBB 825-3 Bioenergetics**
Consideration of important processes for biological energy transduction. Structure/function relationships of membrane components and other interacting macromolecular systems. Cannot be taken for credit in addition to CHEM 825.

**MBB 826-3 Molecular Immunology**
An overview of cellular and humoral immunity with emphasis on the molecular basis of immune recognition and response.

**MBB 827-3 Mechanisms in Enzyme Catalysis**
The study of enzyme mechanisms by a variety of techniques including spectroscopic, kinetic, radiisotopic exchange, and site-directed mutagenesis.

**MBB 828-3 Spectroscopic Methods in Biochemistry**
Application of spectroscopic methods including multidimensional NMR, fluorescence, circular dichroism, and FTIR for determination of biomacromolecular structure. Includes elements of protein conformation.

**MBB 829-3 Special Topics in Biochemistry**
Consideration of recent literature concerning selected contemporary research topics. Can be taken more than once with permission of the instructor.

**MBB 831-3 Molecular Evolution of Eukaryote Genomes**
Examination of the dynamics of change in eukaryotic nuclear, mitochondrial, and chloroplast genome structure and organization.

**MBB 832-3 Molecular Phylogeny and Evolution**
Examination of the basic methods applicable to analyses of molecular phylogeny and evolution.

**MBB 833-3 Developmental Genetics**
Selected topics in the developmental genetics of drosophila.

**MBB 834-3 Topics in Developmental Biology**
Selected topics including pattern formation, morphogenetic determinants, inductive interactions, and differential gene expression in embryos.

**MBB 835-3 Genome Analysis**
Consideration of techniques related to the structure and function of the genome with emphasis on genome mapping and sequencing projects, and computational methods for genomic sequence analysis.

**MBB 839-3 Special Topics in Molecular Biology**
Consideration of recent literature concerning selected contemporary research topics. Can be taken more than once with permission of instructor.

**MBB 861-863-1 Biomolecular Structure and Function Colloquium**
Recent research articles on the structure, function, and interactions of macromolecules including proteins, nucleic acids, and lipids, as well as their complexes, will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts and experimental design and methods. Prerequisite: BISC 331/MBB 331 or equivalent.

**MBB 871-1 Directed Readings in Molecular Biology and Biochemistry**
Programs of directed reading and critical discussions offered by faculty or staff members to individual students according to their needs. Study programs must be approved by the molecular biology and biochemistry graduate studies committee.

**MBB 872-2 Directed Readings in Molecular Biology and Biochemistry**
Programs of directed reading and critical discussions offered by faculty or staff members to individual students according to their needs. Study programs must be approved by the molecular biology and biochemistry graduate studies committee.

**MBB 873-3 Directed Readings in Molecular Biology and Biochemistry**
Programs of directed reading and critical discussions offered by faculty or staff members to individual students according to their needs. Study programs must be approved by the molecular biology and biochemistry graduate studies committee.

**MBB 889-6 MSc Thesis**
MBB 899-6 PhD Thesis

**Nuclear Science NUSC**
**Faculty of Science**

**NUSC 341-3 Introduction to Radiochemistry**
Brief description of the nucleus and its decays and reactions; interaction of radiation with matter; nuclear instrumentation; radioisotopes in chemistry; activation analysis and related analytical techniques; other applications of nuclear techniques; nuclear reactors and nuclear fusion. Prerequisite: completion of 60 credit hours in a science program, including first year calculus, chemistry and physics. Quantitative.

**NUSC 342-3 Introduction to Nuclear Science**
Review of nuclear properties and systems. Properties of the nuclear force; shell model and structure of complex nuclei, nuclear decay via particle emission and spontaneous fission; experimental description of nuclear reactions; nucleon-nucleus and heavy ion reactions. Prerequisite: NUSC 341 or permission of the department. Recommended: MATH 251 Quantitative.

**NUSC 344-3 Nucleosynthesis and Distribution of the Elements**
Formation and distribution of the chemical elements in the early universe, in present stellar environments and in the solar system; elemental abundances and isotopic ratios; and radiometric chronology techniques. Prerequisite: completion of 60 credit hours in a science program, including first year calculus, chemistry and physics. Quantitative.

**NUSC 346-2 Radiochemistry Laboratory**
Introduction to the techniques of radiochemistry; proportion and Geiger counters; sample preparations and half-life measurement; synthesis and separation of labelled compounds; beta and gamma-ray spectroscopy. Prerequisite: NUSC 341. Quantitative.

**NUSC 444-3 Special Topics in Nuclear Science**
Advanced topics in nuclear science. Prerequisite: NUSC 342 or 442, or permission of the department.

**Philosophy PHIL**
**Faculty of Arts and Social Sciences**

**PHIL XX1-3 Critical Thinking**
An introduction to the evaluation of arguments as they are encountered in everyday life. The central aim will
be to sharpen skills of reasoning and argumentation by understanding how arguments work and learning to distinguish those which actually prove what they set out to show from those which do not. Open to all students. Quantitative.

PHIL 100W-3 Knowledge and Reality
An introduction to the central problems of philosophy. Topics to be discussed include the different theories of reality; the nature and sources of knowledge, truth, evidence, and reason; the justification of belief and knowledge about the universe. These topics and problems will be considered as they arise in the context of issues such as: relativism versus absolutism; the existence of God; personal identity; the nature of the mind and its relation to the body; free will and determinism; the possibility of moral knowledge. Open to all students. Writing/Breadth-Humanities.

PHIL 110-3 Introduction to Logic and Reasoning
The aim of this course is to familiarize students with fundamental techniques of correct reasoning. Special attention is given to the methods of logic in particular, and to their role in the discovery of truth not only within science and philosophy but within all forms of rational enquiry. Open to all students. Quantitative.

PHIL 120W-3 Introduction to Moral Philosophy
An introduction to the central problems of ethics: for example, the nature of justice and wrong, the objectivity or subjectivity of moral judgments, the relativism or absolutism of values, the nature of human freedom and responsibility. The course will also consider general moral views such as utilitarianism, theories of rights and specific obligations, and the ethics of the virtue. These theories will be applied to particular moral problems such as abortion, punishment, distributive justice, freedom of speech, and racial and sexual equality. Sometimes the course will also focus on important historical figures such as Plato, Aristotle, Kant and Mill. Open to all students. Writing/Breadth-Humanities.

PHIL 144-3 Introduction to the Philosophy of Natural and Social Science
An introduction to philosophical issues concerning the nature of science. Topics to be discussed include the distinction between science and pseudo-science, the nature of scientific method, the nature of explanation in the natural and social sciences, the phenomenon of scientific change and the relationship between scientistic theory and observation, and the objectivity of social science. Students who have completed PHIL 244 may not take this course for further credit. Breadth-Humanities/Science.

PHIL 150-3 History of Philosophy I
A survey of philosophic thought from late antiquity to the Renaissance. Special attention will be given to the works of Socrates, Plato, Aristotle, Augustine, and Aquinas. The views of these great thinkers have helped to shape the ways in which we see the world. This course is therefore recommended to everyone with an interest in our intellectual heritage. Open to all students. Breadth-Humanities.

PHIL 151-3 History of Philosophy II
A survey of philosophic thought from the Renaissance to the 20th Century. Special attention will be given to the works of Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, Kant, Hegel and Mill. The views of these great thinkers have helped to shape the ways in which we see the world. This course is therefore recommended to everyone with an interest in our intellectual heritage. Open to all students. Breadth-Humanities.

PHIL 201-3 Epistemology
A critical overview of recent accounts of the nature and scope of human knowledge and of justified or rational belief, and of philosophical issues that these accounts are intended to address. Prerequisite: one of PHIL 100, 150, or 151. Students who have taken PHIL 301 cannot take this course for further credit.

PHIL 203-3 Metaphysics
An examination of central problems of metaphysics such as space and time, universals and particulars, substance, identity and personal identity. Prerequisite: one of PHIL 100, 150, 151.

PHIL 210-3 Natural Deductive Logic
This course studies a natural deductive system of propositional and quantificational logic, the first-order theory of identity and the first-order theory of relations. Topics include the metatheory of propositional logic and the application of formal theory to the assessment of natural language arguments. Quantitative.

PHIL 214-3 Axiomatic Logic
This course studies the metatheory of axiomatic propositional and quantificational logic. Topics include proof theory, the metatheory of propositional logic, the proof theory of first-order logic, first-order models, soundness and completeness. Prerequisite: one of PHIL 210, MACM 101, MATH 144, CMPT 205.

Quantitative.

PHIL 220-3 Introduction to Social and Political Philosophy
An introduction to central problems of political and social philosophy: for example, the basis of political obligation, the proper limits of state power, the appropriate scope of individual liberty, and the nature of social justice. Sometimes the course will focus on the views of historically important political philosophers such as Plato, Aristotle, Hobbes, Locke, Rousseau, Burke, Bentham, Mill and Marx.

PHIL 231-3 Selected Topics
A specific topic, philosopher or philosophical work to be dealt with as occasion and demand warrant.

PHIL 240-3 Philosophy of Religion
A critical analysis of classic and contemporary arguments concerning the rationality of belief in God, and related issues.

PHIL 241-3 Philosophy in Literature
Philosophical themes in the writings of such authors as Voltaire, Turgenev, Dostoevski, Sartre, Camus, Conrad and Golding.

PHIL 242-3 Philosophy of Art
An examination of issues concerning the nature of works of art. The course will include a consideration of rival theories of art such as: art as expression, art as representation, art as significant form. Theories of aesthetic criticism will be studied in relation to taste, personal experience, and truth.

PHIL 280-3 Introduction to Existentialism
A study of existentialist philosophers such as Kierkegaard, Nietzsche, Heidegger, Sartre, and Camus and a survey of precursors such as Kant and Hegel.

PHIL 300-3 Introduction to Philosophy
An introductory course specifically intended for students in other departments who have at least 60 semester hours credit. This course is more advanced than 100 and 200 division courses and is of interest to students not only in the humanities, but also in the natural and social sciences. Prerequisite: at least 60 semester hours credit. Normally, students with credit for PHIL 100 may not take this course for further credit. This course may not count towards the upper division requirements for a student pursuing a minor, major, or honors program in philosophy. Breadth-Humanities.

PHIL 302-3 Topics in Epistemology and Metaphysics
An exploration of philosophical issues concerning, e.g.: causation, time, modality, or the self; the realism/nominalism or realism/idealism debate; relativism; the concept of truth; naturalized epistemology; global epistemological skepticism or perhaps a 'local' form of skepticism such as skepticism about induction or about sensory belief. Prerequisite: PHIL 201 or 203.

PHIL 314-3 Topics in Logic I
An examination of one or more topics such as: philosophical logic; deontic logic; the logic of knowledge and belief; the logic of preference; tense logic; foundations of set theory; recursive functions; the historical development of logic. Recommended: PHIL 210, 214, or an otherwise suitable background.

PHIL 319-3 Applied Health Ethics
Practical ethical and legal issues in health sciences, emphasizing population and public health. Case studies approach highlighting current ethical dilemmas and decision-making in the context of global to local legal frameworks. Prerequisite: 30 credit hours of completed course work. PHIL 319 is identical to HSCI 319, and students cannot receive credit for both courses. This course cannot be taken for credit as upper division philosophy.

PHIL 320-3 Social and Political Philosophy
An examination of one or more topics in social and political philosophy, Contemporary or historical readings or a mixture of these will be used. Possible topics include: justice, the law and legal systems, sovereignty, power and authority, democracy, liberty and equality. Sometimes the course will focus on the views of historically important political philosophers, such as Plato, Aristotle, Hobbes, Locke, Rousseau, Burke, Bentham, Mill and Marx. Prerequisite: PHIL 120 or 220.

PHIL 321-3 Moral Issues and Theories
An advanced investigation of general moral issues and theories in moral philosophy. In any given term, the course may focus on a general theory or concept or concern, for example meta-ethics, utilitarianism, or theories of rights. Sometimes it will focus on a particular problem or problems, such as medical ethics, moral personhood, or free will and moral responsibility. Prerequisite: PHIL 120.

PHIL 322-3 History of Ethics
An examination of an issue or selection of issues in the history of moral or political philosophy. Historical readings will be the primary focus and may include important figures such as Aristotle, Hobbes, Locke, Hume, and Kant. Prerequisite: One of PHIL 120, 150, 151, 220.

PHIL 331-333-3 Selected Topics
Prerequisite: as stated by department at time of offering.

PHIL 341-3 Philosophy of Science
A study of the nature of scientific enquiry, classificatory systems, laws and theories, the role of observation in science, the demarcation between science and non-science, causality, the status of theoretical constructs, and teleological explanation. Prerequisite: PHIL 100 and 203, or COGS 200; PHIL 210 or 214.

PHIL 343-3 Philosophy of Mind
A study of theories of the mind, consciousness, and human action. Prerequisite: PHIL 100 and 203, or COGS 200.

PHIL 344-3 Philosophy of Language I
An introduction to the major philosophical theories of language. Topics to be considered include the relationship between language and mind, language and the world, language and society. Prerequisite: PHIL 100 and 203, or COGS 200.

PHIL 350-3 Ancient Philosophy
Prerequisite: PHIL 100 or

PHIL 352-3 17th Century Philosophy
An examination of some central issues in 17th century philosophy. Themes may include: changing
PHIL 412W-4 Ethical Theories
A highly focussed, advanced examination of a selection of topics in normative or meta-ethics. Prerequisite: one of PHIL 120, 320, or 321. Writing.

PHIL 435-4 Selected Topics
A specific topic, philosophical or philosophical work to be dealt with as occasion and demand warrant. Prerequisite: two 300 level Philosophy courses.

PHIL 444W-4 Philosophy of Language II
Advanced topics in recent work in philosophy of language, such as meaning, reference, speech acts, and language and thought. Prerequisite: PHIL 210 or 214. Writing.

PHIL 451W-4 Kant
Prerequisite: at least one of PHIL 353, 354, 355. Writing.

PHIL 455W-4 Contemporary Issues in Epistemology and Metaphysics
Prerequisite: two 300 division PHIL courses. Writing.

PHIL 467W-4 Seminar II
Prerequisite: two 300 division PHIL courses. Writing.

PHIL 477-5 Honors Tutorial I
Prerequisite: PHIL 477 is a requisite for all honors students, and must be taken in one of the last two semesters of the student's philosophy program. It must be taken concurrently with or prior to PHIL 478. At least eight weeks prior to the semester in which they wish to enrol in PHIL 477, honors students should obtain departmental approval of a proposed syllabus and arrange for faculty supervision of the course. Open only to honors students.

PHIL 478-5 Honors Tutorial II
Prerequisite: PHIL 478 is a requisite for all honors students, and must be taken in one of the last two semesters of the student's philosophy program. It must be taken concurrently with or consecutively to PHIL 477. At least eight weeks prior to the semester in which they wish to enrol in PHIL 478, honors students should obtain departmental approval of a proposed syllabus and arrange for faculty supervision of the course. Open only to honors students.

PHIL 823-5 Selected Topics Meta-Ethics
PHIL 824-5 Selected Topics Moral Psychology
PHIL 825-5 Selected Topics in Social and Political Philosophy
PHIL 826-5 Selected Topics in Aesthetics
PHIL 852-5 Selected Topics in Ancient Philosophy
PHIL 853-5 Selected Topics in Medieval Philosophy
PHIL 854-5 Selected Topics in Seventeenth and Eighteenth Century Philosophy
PHIL 855-5 Selected Topics in Nineteenth and Twentieth Century Philosophy
PHIL 861-5 Directed Studies: Selected Topics I
PHIL 862-5 Directed Studies: Selected Topics II
PHIL 864-5 Directed Studies: Selected Topics IV
PHIL 865-5 Directed Studies: Selected Topics V
PHIL 880-5 Pro-Seminar
PHIL 896-6 MA Thesis
PHIL 899-6 Non-Thesis Project Completion
PHIL 998-6 PhD Thesis

Physics PHYS
Faculty of Science

PHYS 100-3 Introduction to Physics
A course for students with relatively weak backgrounds in physics. Kinematics and dynamics; waves; optics; electricity and magnetism. Prerequisite: BC Physics 11 (or equivalent); BC Principles of Mathematics 12 (or equivalent) or MATH 100 (may be taken concurrently). Students who have obtained a grade of C+ or better in BC high school Physics 12 (or its equivalent) or who have taken any further physics course normally may not take PHYS 100 for credit. Tutorials will be held in the open workshop format, i.e. unstructured periods each week when teaching assistants are available to answer questions and help with problem assignments.

PHYS 101-3 Physics for the Life Sciences I
Force and motion, conservation of energy and momentum, fluids, properties of soft matter and thermal physics with applications taken from the life sciences. Prerequisite: BC Principles of Physics 12 or PHYS 100 or equivalent. This prerequisite may be waived, at the discretion of the department, as determined by the student's performance on a regularly scheduled PHYS 100 final exam. Please consult the physics advisor for further details. Corequisite: MATH 150 or 151 or 154 must precede or be taken concurrently. Students with credit for PHYS 101, 125 or 140 may not take PHYS 120 for further credit. Corequisite: MATH 152 or 155 must precede or be taken concurrently. Students with credit in PHYS 101, 125 or 140 may not take PHYS 125 for further credit. Quantitative.

PHYS 102-3 Electricity, Magnetism and Light
Electricity, magnetism, and the electromagnetic character of light for students with good preparation in physics and mathematics. Topics include wave optics, simple circuits, electricity, magnetism, the unifications of electromagnetism in relativity, light as an electromagnetic wave, and photons. Prerequisite: PHYS 101 for a grade of A or better in PHYS 120 or 140. Corequisite: MATH 152 or 155 must precede or be taken concurrently. Students with credit in PHYS 102, 121 or 141 may not take PHYS 126 for further credit. Quantitative.

PHYS 103-2 Physics for the Life Sciences Laboratory
Elementary experiments in optics, electricity, mechanics and heat that are designed to augment the general survey course. Prerequisite: PHYS 102 should be taken concurrently, or by permission of the department. Students with credit for PHYS 131 or 141 may not take PHYS 130 for further credit. Quantitative.

PHYS 131-2 Physics Laboratory I
Elementary experiments in optics, electricity, and mechanics that are designed to augment the general survey courses. Prerequisite: PHYS 121 or 128 should be taken concurrently or may precede; or by permission of the department. Students with credit for PHYS 130 or 141 may not take PHYS 131 for further credit. Quantitative.

PHYS 140-4 Studio Physics -- Mechanics and Modern Physics
A general calculus-based introduction to mechanics taught in an integrated lecture-laboratory environment. Topics include translational and rotational motion, momentum, energy, gravitation, and selected topics in modern physics. Prerequisite: BC Principles of Physics 12, or equivalent. Corequisite: MATH 150 or 151 or 154 must precede or be taken concurrently. Students with credit for PHYS 125 or 140 may not take PHYS 140 for further credit. Quantitative/Breadth-Science.

PHYS 141-4 Studio Physics -- Optics, Electricity and Magnetism
A general calculus-based introduction to electricity, magnetism and optics taught in an integrated...
or 425 may not take PHYS 421 for further credit. Quantitative.

PHYS 430-4 Digital Electronics and Interfacing
Digital logic design with particular apparatus. Construction and use of interface devices for various laboratory experiments. Prerequisite: PHYS 326 or permission of the instructor. Quantitative.

PHYS 431-4 Advanced Physics Laboratory I
Advanced experiments in Physics. May include special projects. Prerequisite: PHYS 385 and either PHYS 332 or (PHYS 326 and 465). Quantitative.

PHYS 432-5 Undergraduate Honors Thesis
Undergraduate research and preparation of an honors thesis. The research project may be in experimental or theoretical physics. Prospective students must obtain agreement of a faculty member willing to supervise the project, and submit the project to the physics department for approval at least two months prior to registering for the course. The research must be done during the semester in which the student is registered for the course, and may not be part of a co-op practicum. The course will be graded on the basis of the honors thesis, which must be submitted before the end of the semester. Prerequisite: all students interested in taking this course must consult with their faculty supervisor regarding prerequisites; normally requires PHYS 431.

PHYS 433-3 Biological Physics Laboratory
Experiments in biological and soft condensed matter physics including the investigation of Brownian motion, molecular order and biophysical forces using techniques such as optical trapping, NMR, spectroscopy and x-ray diffraction. Attention will also be given to more general skills, including experimental design, operating and troubleshooting experimental equipment, data analysis, and the presentation of experimental results. Prerequisite: PHYS 231 or MBB 209; PHYS 344 or PHYS 347 or MBB 323 or CHEM 360, or permission of the department. Quantitative.

PHYS 435-3 Practicum III
This is the third semester of work experience in a co-operative education program available to students who are studying physics or related areas, such as biophysics, chemical physics or mathematical physics. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: PHYS 336 and 60 credit hours with a minimum cumulative GPA of 2.75. Students should apply to the department at least one semester in advance. A course fee is required. This course is evaluated on a pass/withdrawal basis.

PHYS 436-3 Practicum IV
This is the fourth semester of work experience in a co-operative education program available to students who are studying physics or related areas, such as biophysics, chemical physics or mathematical physics. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: PHYS 435 followed by 12 credit hours. A minimum cumulative GPA of 2.75. Students should apply to the department at least one semester in advance. A course fee is required. This course is evaluated on a pass/withdrawal basis.

PHYS 437-3 Practicum V
This is an optional fifth semester of work experience in a co-operative education program available to students who are studying physics or related areas such as biophysics, chemical physics or mathematical physics. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: PHYS 436 and a minimum cumulative GPA of 2.75. Students should apply to the department at least one semester in advance. A course fee is required. This course is evaluated on a pass/withdrawal basis.

PHYS 445-3 Statistical Physics
Postulates of statistical mechanics, partition functions, applications to gases, paramagnetism and equilibrium. Quantum statistics and applications. Prerequisite: PHYS 344 or CHEM 360. Recommended: PHYS 385, Quantitative.

PHYS 455-3 Modern Optics
Optical physics, including geometrical and physical optics, waves in anisotropic media, coherence, image formation and Fourier optics, guided wave optics and selected advanced topics such as lasers, nonlinear optics, photons and quantum optics. Prerequisite: PHYS 321 or 221; PHYS 385 (or equivalent). Quantitative.

PHYS 465-3 Solid State Physics
Crystal structure, lattice vibrations and thermal properties of solids, free electron model, band theory, and applications. Prerequisite: PHYS 385. Quantitative.

PHYS 484-3 Nonlinear Physics
Nonlinear mechanics, nonlinear lattice dynamics, competition phenomena, applications in optics and chemistry, forced oscillations, chaos. Prerequisite: PHYS 384 or permission of the department. Quantitative.

PHYS 485-3 Particle Physics
Physics of elementary particles. Symmetries, strong interactions, electromagnetic interactions, weak interaction. Prerequisite: PHYS 385 or CHEM 464 or permission of the department. Recommended: PHYS 380. Students with credit for NUSC 485 may not take this course for further credit. Quantitative.

PHYS 490-3 General Relativity and Gravitation
Gravity and space-time, Einstein’s equations and their solutions, tests of relativity, black holes, stellar equilibrium and collapse, and cosmological models. Prerequisite: PHYS 285 or MATH 471; PHYS 384. Quantitative.

PHYS 492-493-3 Special Topics in Physics
Studies in areas not included within the undergraduate course offerings of the Department of Physics. Prerequisite: permission of the department.

PHYS 801-2 Student Seminar
Discussion of recent developments in physics, based on student seminars. Attendance is required for all students proceeding toward MSc or PhD degrees in physics. Course offered regularly.

PHYS 810-3 Statistical Mechanics
Review of foundations of quantum mechanics, states of equilibrium and collapse, and cosmological models. Prerequisite: PHYS 810 or equivalent. Quantitative.

PHYS 811-3 Advanced Topics in Quantum Mechanics
A continuation of PHYS 810: scattering theory, spin statistics, creation and annihilation operators, diagrammatic perturbation theory, relativistic QM. Prerequisite: PHYS 810 or equivalent.

PHYS 812-3 Introduction to Quantum Field Theory
Lorentz group and representations, Dirac and Klein-Gordon Equations, Maxwell’s equations and quantization, perturbation theory, Feynman diagrams and rules, strong and weak interactions. Course offered occasionally. Prerequisite: PHYS 811 or equivalent.

PHYS 821-3 Electromagnetic Theory
Advanced topics in classical electromagnetic theory: review of Maxwell’s equations, wave propagation, radiation theory, special relativity and electromagnetic theory; magnetohydrodynamics and plasma physics, radiation damping. Course offered regularly. Prerequisite: PHYS 425, or equivalent.

PHYS 841-3 Statistical Mechanics
Review of ensembles and thermodynamics, ideal gases, imperfect classical gases, classical and modern theories of phase transitions, renormalization group. Course offered regularly. Prerequisite: PHYS 345, or equivalent.

PHYS 846-3 Nonlinear Physics
Nonlinear dynamics and chaos. Pattern formation and an introduction to turbulence. Prerequisite: PHYS 384 or equivalent.

PHYS 847-3 Topics in Soft-Condensed Matter and Biological Physics
An introduction to one of several topics in soft-condensed matter and biological physics. Recent versions of this course have focused on polymers, liquid crystals, structures of biological membranes, and cell mechanics. Corequisite: PHYS 841.

PHYS 861-3 Introduction to Solid State Physics
Free electron theory, crystal structure, band theory, Bloch’s theorem, electron dynamics, phonons, semiconductors. Course offered regularly. Prerequisite: PHYS 465 or equivalent, and PHYS 415.

PHYS 862-3 Solid State Physics II
Special topics in solid state physics such as superconductivity, magnetism, optical properties of solids, electron correlations. Course offered regularly. Prerequisite: PHYS 861.

PHYS 863-3 Surface Science, Thin Films and Interfaces
Review of surface science techniques: Auger, XPS electron spectroscopies, low energy electron diffraction (LEED), high energy electron diffraction (RHEED), Scanning tunnelling microscopy (STM). Review of thin film deposition techniques: molecular beam epitaxy of metallic and semiconductor multilayer and superlattice structures. Physics and chemistry of surfaces and interfaces. Course offered occasionally. Prerequisite: PHYS 810, 821, 861 or permission of the department.

PHYS 864-3 Structural Analysis of Materials
The application of transmission electron microscopy (TEM) and x-ray diffraction techniques to the study of the structure of materials. Hands-on instruction about the operation of a TEM and x-ray diffractometers is provided. The basic theory required for analyzing TEM and x-ray images and diffraction data is described. Prerequisite: Permission of instructor.

PHYS 871-3 Introduction to Elementary Particle Physics
Elementary particle phenomenology; classification of particles, forces, conservation laws, relativistic scattering theory, electromagnetic interactions of leptons and hadrons, weak interactions, gauge theories, strong interactions. Course offered occasionally.

PHYS 880-3 Applications of Group Theory to Physics
Elements of group theory, matrix representations, the Clebsch-Gordan series, applications of finite and continuous groups to problems in atomic, solid state and elementary particle physics. Course offered occasionally.

PHYS 881-3 Special Topics I
PHYS 882-3 Special Topics II
PHYS 883-3 Special Topics III
PHYS 884-2 Special Topics IV
PHYS 885-2 Special Topics V
PHYS 886-2 Special Topics VI
PHYS 887-1 Special Topics VII
PHYS 888-1 Special Topics VIII
PHYS 889-1 Special Topics IX
PHYS 898-6 MSc Thesis
PHYS 899-6 PhD Thesis
Political Science POL
Faculty of Arts and Social Sciences

POL 100-3 Introduction to Politics and Government
A comprehensive introduction to the study of politics and government for both political science majors and students specializing in other disciplines. The course will explore the major concepts, methods, approaches and issues in political science, as well as the primary components of government structure and the political process. POL 101W is the Writing certified version of POL 100 and students cannot take both courses for credit. Prerequisite: POL 100 or 101W. Breadth-Social Sciences.

POL 101W-3 Introduction to Politics and Government
A comprehensive introduction to the study of politics and government for both political science majors and students specializing in other disciplines. Explores the major concepts, methods, approaches and issues in political science, as well as the primary components of government structure and the political process. This course is identical to POL 100 and students may not take both courses for credit. Writing/Breadth-Social Sciences.

POL 151-3 The Administration of Justice
The development of laws and their application to the citizen and social relations. Special consideration will be given to civil liberties. Breadth-Social Sciences.

POL 201-3 Research Methods in Political Science
An introduction to quantitative research techniques in political science. Prerequisite: POL 100 or 101W or 151 or permission of department. Students with credit for IS 240, POL 213 or SA 255 may not take POL 201 for further credit. Quantitative.

POL 210-3 Introduction to Political Philosophy
An examination of selected contemporary political controversies that raise fundamental ethical issues. Discussion will be informed by contending perspectives in modern political philosophy. Prerequisite: POL 100 or 101W or permission of department. Breadth-Social Sciences.

POL 211-3 Politics and Ethics
An examination of selected contemporary political controversies that raise fundamental ethical issues. Discussion will be informed by contending perspectives in modern political philosophy. Prerequisite: POL 100 or 101W or permission of department. Breadth-Social Sciences.

POL 221-3 Introduction to Canadian Government
An introduction to the institutional order and political structure of the Canadian state. The course will include topics such as the constitution, parliament, cabinet, judiciary, public service and federal-provincial relations. Prerequisite: POL 100 or 101W or 151 or permission of department.

POL 222-3 Introduction to Canadian Politics
An introduction to the social and participatory basis of Canadian politics, covering topics such as political culture, regionalism and other political divisions, political parties, elections, interest groups and new social movements. Prerequisite: POL 100 or 101W or 151 or permission of department.

POL 223-3 Canadian Political Economy
An introductory study of Canada's political economy, stressing the interrelated nature of Canada's economic and political life. The course focuses on current economic problems and policies, taking into account the geographical, historical and political environments. Topics include the resource and industrial structures, research and development, the public sector, fiscal and monetary policy, the role of the state, trade and foreign ownership, energy, regional disparity, corporate concentration and the political economy of federalism. This course is identical to CNS 280 and students cannot take both courses for credit. Recommended: POL 100 or 101W. Breadth-Social Sciences.

POL 231-3 Introduction to Comparative Government and Politics
An introduction to political processes and structures in comparative perspective. Prerequisite: POL 100 or 101W or permission of department. Breadth-Social Sciences.

POL 232-3 US Politics
An examination of the American political system, including the presidency, the congress, the courts, the bureaucracy and the party system. Prerequisite: POL 100 or 101W or permission of the department. Students who have credit for POL 332 may not take POL 232 for further credit.

POL 241-3 Introduction to International Politics
Theory and practice of international politics, diplomacy, hot war, cold war, alliances and the role of leaders. Prerequisite: POL 100 or 101W or permission of the department. Breadth-Social Sciences.

POL 251-3 Introduction to Canadian Public Administration
An introduction to the basic elements of public administration in the government of Canada, including the organization of the public service, planning and financial administration, personnel administration, collective bargaining and administrative regulation. Prerequisite: POL 100 or 101W or 151 or permission of department.

POL 252-3 Local Democracy and Governance
The political processes in the urban municipality from a comparative perspective. Prerequisite: POL 100 or 101W or 151 or permission of department. Breadth-Social Sciences.

POL 290-3 Political Science Practicum I
First semester of work experience in the Political Science Co-operative Education program. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the preceding semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 30 credit hours with a CGPA of 3.0. Transfer students must complete at least 15 credit hours at Simon Fraser University.

POL 291-3 Political Science Practicum II
Second semester of work experience in the Political Science Co-operative Education Program. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the preceding semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: POL 290; 45 credit hours with a CGPA of 3.0.

POL 301-3 Political Science Practicum III
Third semester of work experience in the Political Science Co-operative Education Program. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the preceding semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: POL 291, 60 credit hours, and a minimum CGPA of 3.0.

POL 312-4 Modern Political Thought
A discussion of selected political philosophers in the western tradition from Hobbes to Rawls. Prerequisite: POL 210 or 60 credit hours, or permission of the department.

POL 313-4 Political Ideologies
Discussion of the major political ideologies in western political systems: liberalism, conservatism, the new right, socialism and social democracy, feminism and environmentalism. Emphasis is placed on their conceptual foundations and contemporary expressions. Prerequisite: POL 210 or 312 or permission of the department.

POL 314-4 Theory and Explanation in Political Science
A discussion of issues in the philosophy of the social sciences which are relevant to the study of politics and a critical evaluation of contemporary approaches to political inquiry, including empirical theory, rational choice theory and hermeneutics. Prerequisite: six lower division credits in political science or permission of the department. Quantitative.

POL 315-4 Quantitative Methods in Political Science
An examination of the principal methods of empirical research in political science. This course is equivalent to SA 355. Prerequisite: POL 201, or SA 255 or STAT 203 (formerly 103). Students who have completed POL 315 may not take SA 355 for further credit. Quantitative.

POL 319-4 Selected Topics in Political Theory
Prerequisite: six lower division credits in political science or permission of the department.

POL 320-4 Canada and Latin America
An analysis of Canada's multi-faceted relations with Latin America. Topics include: the history of Canada's foreign policy towards Latin America, trade and investment, official development assistance and the role of non-governmental organizations, human rights, immigration and refugee policy, and participation in multilateral institutions (e.g. the OAS). Students who have taken LAS 320 cannot take this course for further credit.

POL 321-4 The Canadian Federal System
Development of the federal system including topics such as the division of powers, parties, federal-provincial relations and theories of federalism. Prerequisite: six lower division credits in political science or permission of the department.

POL 322-4 Canadian Political Parties
Development of the Canadian party system, Party ideologies, organization, campaigns and elections. Prerequisite: six lower division credits in political science or permission of the department.

POL 323-4 Provincial Government and Politics
An examination of the historical development of the provinces and the role they play in Confederation. The course surveys the evolution of provincial economies, societies and governments in order to understand the contemporary issues and problems faced by Canada's provincial states. Prerequisite: six lower division credits in political science or permission of the department.

POL 324-4 The Canadian Constitution
An analysis of the Canadian constitution from a theoretical and comparative perspective. Amendment, entrenchment, civil rights. Prerequisite: six lower division credits in political science or permission of the department.

POL 327-4 Globalization and the Canadian State
In an era of globalization, what scope remains for national politics? Does globalization lead to a deficit of democracy? This course examines the challenge that globalization poses for the Canadian political system. Emphasis is placed on globalization's impact on the organization, activities and role of Canadian State. Prerequisite: six lower division credits in political science or permission of the department.

POL 329-4 Selected Topics in Canadian Government and Politics
Prerequisite: six lower division credits in political science or permission of the department.
POL 333-4 Soviet and Post-Soviet Political Systems
A comprehensive introduction to the evolution of the Soviet political system and the post-Soviet successor states. Topics examined will include the factors responsible for the disintegration of the USSR, the structure and dynamics of the Russian political system and the problems of post-Communism through the Eurasian region. Prerequisite: six lower division credits in political science or permission of the department.

POL 334-4 East European Political Systems
A comprehensive introduction to the political organization and political dynamics of the east European states including an examination of the various political institutions and problems which have influenced the political development of those countries. Prerequisite: six lower division credits in political science or permission of the department.

POL 335-4 Government and Politics: People's Republic of China I
An examination of the political development of China in modern times with special emphasis on political culture and its relationship to political institutions, political processes and political behavior. Prerequisite: six lower division credits in political science or permission of the department.

POL 337-4 Government and Politics: Selected Latin American Nations
An examination of the political systems of selected Latin American nations, including an analysis of political culture, political economy, political institutions, interest groups and both formal and informal political processes. Prerequisite: six lower division credits in political science or permission of the department. This course is identical to LAS 337 and students cannot take both courses for credit.

POL 339-4 Selected Topics in Comparative Government and Politics
Prerequisite: six lower division credits in political science or permission of the department.

POL 341-4 International Integration and Regional Association
Theories of integration, and the empirical analysis of selected regional associations, historical and contemporary. Prerequisite: six lower division credits in political science or permission of the department.

POL 342-4 Relations Between Developed and Developing Nations
Problems arising from the disparities in power and wealth between the highly industrialized countries of Europe and North America, and the under-industrialized countries of Asia, Africa and Latin America. Prerequisite: six lower division credits in political science or permission of the department.

POL 343-4 Global Political Economy
An introduction to the study of the international political economy, with an emphasis on the interaction between the state and markets, and the basic political-institutional relationships of trade, money and finance, international investment, foreign debt and foreign aid. Prerequisite: six lower division credits in political science or permission of the department.

POL 344-4 Public International Law
Sovereignty, nationality, jurisdiction, arbitration. Examination of selected cases exemplifying present trends in the international legal order. Prerequisite: six lower division credits in political science or permission of the department.

POL 345-4 The Nation-State and Multinational Corporation
A study of relations between multinational enterprise and national interests in developed and developing countries. Prerequisite: six lower division credits in political science or permission of the department.

POL 346-4 International Organizations
An examination of the structures and processes and the main substantive decisions of the United Nations and related international organizations. Based upon in-depth study of the UN Charter, the Security Council, General Assembly, Secretary-general and Secretariat and their constitutional and political interactions since 1945, with special attention to the theory and practice of international organization advanced by the principal Western countries, the Soviet Union and Soviet bloc, the People’s Republic of China and leading Third World countries. Prerequisite: six lower division credits in political science or permission of the department.

POL 347-4 Introduction to Canadian Foreign Policy
An overview of Canadian foreign policy post World War II. Various perspectives are discussed including realism, economic nationalism, liberal internationalism and political economy/dependency analysis. A variety of analytical perspectives are used to examine issue-areas such as foreign trade including the role of NAFTA, defence policy and alliance relations, foreign investment, foreign aid, immigration policy, energy policy and the role of domestic political factors in foreign policy decision-making. Prerequisite: six lower division credits in political science or permission of the department.

POL 348-4 Theories of War, Peace and Conflict Resolution
Examines the origins and causes of several major conflicts during the last century. This course reviews various theories on the causes of conflict and war in the international system. It also examines the techniques of preventive diplomacy, peacekeeping, crisis management and coercive diplomacy as they have been used to try to forestall open warfare and maximize the opportunities for peaceful change and the negotiated resolution of international disputes. Both documentary and feature films will be used to illustrate many types of conflict and warfare in the international system. Course simulations, when employed, will concentrate on the problems and risks that are involved in international efforts to contain and reverse the proliferation of weapons of mass destruction. Prerequisite: six lower division credits in political science or permission of the department.

POL 349-4 Selected Topics in International Relations
Prerequisite: six lower division credits in political science or permission of the department.

POL 351-4 The Public Policy Process
Course for a practical analysis of the structures and processes surrounding contemporary public policy issues and a theoretical analysis of alternative approaches to the study of public issues and a theoretical analysis of alternative approaches to the study of public policy-making. Prerequisite: six lower division credits in political science or permission of the department.

POL 352-4 Urban and Local Governance in Canada
A comparative study of local government in Vancouver, Winnipeg and Toronto. The non-partisan tradition and interest groups. Relations with other levels of government. Prerequisite: six lower division credits in political science or permission of the department.

POL 353-4 Public Sector Management
A detailed analysis of administrative planning in the public sector, particularly as it relates to the Canadian government. The significance of financial management and personnel management to the overall planning will be emphasized. Prerequisite: six lower division credits in political science or permission of the department.

POL 354-4 Comparative Metropolitan Governance
A comparative analysis of regional metropolitan governance in Canada and selected other jurisdictions (such as the USA, UK, etc.). The course involves an examination of major policy dilemmas in urban development, and of the local, regional and senior intergovernmental relations within which much of the public policy making in metropolitan settings takes place. Prerequisite: six lower division credits in political science or permission of the department.

POL 355-4 Governing Instruments
Examines and compares the various means at the disposal of government for implementing policy options, including regulation, the creation or privatization of public enterprises, the delivery or contracting out of services, taxation and tax expenditures, and any other administrative or legislative processes that governments in Canada and/or in similar countries have used to manage the economy or effect social change. Prerequisite: six lower division credits in political science or permission of the department.

POL 356-4 The Political Economy of Labour
Examines the ways in which economic and political forces are constantly changing the nature of work. The focus will be on both paid and unpaid work; the problems of inequality; and the ways in which workers have organized to protect their interests. The course material will deal mainly, although not exclusively, with the political economy of labor in contemporary Canada. Prerequisite: six lower division credits in political science or permission of the department.

POL 359-4 Selected Topics in Governance
Prerequisite: six lower division credits in political science or permission of the department.

POL 373-4 Human Security
Explores what is involved in shifting the focus in the security realm from ‘national interest’ to the safety and needs of humans. Addresses several contemporary issues of human insecurity such as genocide, terrorism, civil wars and other complex emergencies; the political economy of conflict (small arms, “blood” diamonds); new inequalities (economic, gender, class, ethnicity); and new health risks (ep. HIV/AIDS, SARS, ecological degradation). Considers recent initiatives and trends that have emerged to deal with these issues (eg. humanitarian intervention, International Criminal Court, new coalitions of state and non-state actors such as the Ottawa Process on anti-personnel mines). Prerequisite: six lower division credits in Political Science or permission of the department. Students who have taken POL 349 ‘Special Topics’ for credit under this title may not take this course for further credit.

POL 381-4 Politics and Government of Japan I
The political system of Japan, including an analysis of political culture, political institutions, political behavior and both formal and informal political processes. Emphasis will be placed on the pre-World War II political development of Japan. Prerequisite: six lower division credits in political science or permission of the department.

POL 401-3 Political Science Practicum IV
Fourth semester of work experience in the Political Science Co-operative Education Program. Students should apply to the Faculty of Arts co-op coordinator by the end of the third week of the preceding semester. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: POL 301, 75 credit hours, and a minimum CGPA of 3.0.

POL 411-4 Normative Political Theory
Advanced seminar examining selected themes, debates and texts in recent normative political philosophy, with an emphasis on contemporary

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democratic theory. Prerequisite: POL 210 or 312 or 313; or permission of the department.

POL 414-4 Theories of Political Development
An examination of theories of the social and economic forces which challenge the adequacy of political institutions and political skills. The ideas of B. Moore, A. Huntington, F. A. T. Beste and L. Gurr. Prerequisite: eight upper division credits in political science or permission of the department.

POL 415-4 The Liberal Tradition
A critical examination of the development of liberalism from classical liberalism (e.g. John Locke) to contemporary conflict between revisionist and neo-classical or libertarian currents. Prerequisite: eight upper division credits in political science or permission of the department.

POL 416-4 Feminist Social and Political Thought
This course will examine the works of major feminist thinkers and the problems of developing feminist theory. Prerequisite: eight upper division credits in political science or permission of the department.

POL 417-4 Human Rights Theories
This course introduces students to the problems involved in the assertion of universal moral standards across political and cultural divides. These issues will be explored at a theoretical level, and in the context of specific human rights controversies. Prerequisite: eight upper division credits in political science or permission of the department. Recommended: PHIL 220 or 320.

POL 418-4 Selected Topics in Political Theory
Prerequisite: eight upper division credits in political science or permission of the department.

POL 419-4 Selected Topics in Political Theory II
Prerequisite: eight upper division credits in political science or permission of the department.

POL 422-4 Canadian International Security Relations
The course traces the evolution of Canadian thinking on national international security issues through an examination of pre-World War II isolationism, elite attitudes during the Cold War, the formative period of NATO, as well as Canadian involvement in the Korean and Indochina conflicts. More recent policies concerning ALCM testings, NORAD, and nuclear non-proliferation will also be explored in detail. Prerequisite: eight upper division credits in political science or permission of the department.

POL 423-4 BC Government and Politics
The legislature, political parties, pressure groups, relations with other governments, and other aspects of the policy process. Prerequisite: eight upper division credits in political science or permission of the department.

POL 424-4 Quebec Government and Politics
An examination of the political culture and institutions in the province of Quebec with particular emphasis on the period since 1960. Prerequisite: eight upper division credits in political science or permission of the department.

POL 425-4 Canadian Political Behavior
The study of political attitudes and behavior in Canada. Topics will include political culture, public opinion, elections and voting behavior. Prerequisite: eight upper division credits in political science or permission of the department. Quantitative.

POL 426-4 Canadian Political Behavior
The study of political attitudes and behavior in Canada. Topics will include political culture, public opinion, elections and voting behavior. Prerequisite: eight upper division credits in political science or permission of the department. Writing/Quantitative.

POL 428-4 Selected Topics in Canadian Government and Politics I
Prerequisite: eight upper division credits in political science or permission of the department.

POL 429-4 Selected Topics in Canadian Government and Politics II
Prerequisite: eight upper division credits in political science or permission of the department.

POL 431-4 Comparative Western European Systems
An advanced examination of the political life of Western European democratic systems, with special attention to the role of the constitution and constitutionalism, the meaning of the democratic character of the state, the import, such as the causes and consequences of various types of party systems and the determinants of democratic stability. Prerequisite: eight upper division credits in political science or permission of the department.

POL 432-4 Comparative Communist and Post-Communist Political Systems
A comparative examination of the development and characteristics of socialist political systems in Europe and the former Soviet Union. Prerequisite: eight upper division credits in political science or permission of the department.

POL 433-4 Comparative Developing Systems
A survey of political problems in selected Third World countries. Topics covered will include: the causes of democracy, the role of military governments, possibilities of revolution, and the meaning of economic dependency influences on the political systems of developing nations. Prerequisite: eight upper division credits in political science or permission of the department.

POL 434-4 Comparative Developing Systems
A comparative analysis of federations such as the Canadian, American, West German, Yugoslavian, Soviet, Indian and Swiss. Prerequisite: eight upper division credits in political science or permission of the department.

POL 435-4 Comparative Federal Systems
Comparative analysis of federations such as the Canadian, American, West German, Yugoslavian, Soviet, Indian and Swiss. Prerequisite: eight upper division credits in political science or permission of the department.

POL 436-4 Elections, Parties and Governments in Comparative Perspectives
An examination of the processes by which governments are created, maintained, and destroyed in democratic systems. The effects of different regime types, electoral arrangements, and party systems will be highlighted. Prerequisite: eight upper division credits in political science or permission of the department.

POL 437-4 Governance and Globalization
Explores the ways in which globalization is affecting processes of governance. By focusing on specific issues such as economics, security, human rights, and the environmental aspects of governance, it considers the role and form of states as well as changes in relations among state, business and civil society sectors. Explores changes at the national level, but also examines the growing relevance of interactivity between the national and international levels of governance from local through international, regional and global, the enhanced role of non-state actors in formal governance procedures, and processes of “governance without government”. Prerequisite: eight upper division credits in Political Science or permission of the department. Students who have taken POL 438 or 439 for credit under this title may not take this course for further credit.

POL 438-4 Selected Topics in Comparative Government and Politics I
Prerequisite: eight upper division credits in political science or permission of the department.

POL 439-4 Selected Topics in Comparative Government and Politics II
Prerequisite: eight upper division credits in political science or permission of the department.

POL 440-4 Special Topics: Latin American International Relations
A multidisciplinary study of bilateral issues between Latin America and a specific country or region, e.g. US and Latin America, the Pacific Rim. Historical, economic, and ideological perspectives as well as topics related to business, aid, and immigration will be emphasized. Prerequisite: eight upper division credits in political science or LAS 200 or permission of department. This course (POL 440) is identical to POL 340, LAS 311, 411 and 440, and students cannot take more than one of these courses for credit.

POL 441-4 Comparative Foreign Relations: Selected Political Systems
A comparison of the foreign policies of selected political systems. Subjects treated include the domestic and foreign determinants of foreign policy decisions, the mobilization and application of resources to influence international politics, and the consequences of foreign policy decisions and strategies. Prerequisite: eight upper division credits in political science or permission of the department.

POL 442-4 The Politics of International Trade
Focuses on the theoretical and empirical aspects of international trade relations. Subjects of interest may include the evolution of the global trade regime from the GATT to the WTO, regional trade groupings such as the European union and NAFTA, the special trade problems of less developed countries and transition economies, and the growing role of civil society in international trade. Prerequisite: eight upper division credits in political science or permission of the department.

POL 443-4 Nuclear Strategy, Arms Control, and International Security
Provides an overview of the evolution of US and Soviet strategic policies since World War II. The political and doctrinal bases of national strategic debates are closely examined, as are the various obstacles to a more stable international arms control regime. Prerequisite: eight upper division credits in political science or permission of the department.

POL 444-4 Politics and Foreign Policy of the European Union
This course offers a comparative foreign policy analysis of EEC members, as well as an introduction to European political co-operation. Focuses on institutions of the EEC, including the Commission, Council of Ministers, European Council and European Parliament. Provides an analysis of both internal EC issues such as Common Agricultural Policy and European Monetary Union and external issues such as trade and security relations. Prerequisite: eight upper division credits in political science or permission of the department.

POL 445-4 American Foreign Policy: Processes, Issues
Examines US foreign policy in the post World War II era. Topics to be covered will include the formation of foreign policy, 20th century American security issues, alliance relations, crisis management and international economic relations. Prerequisite: eight upper division credits in political science or permission of the department.

POL 446-4 International Relations in East Asia
An overview and analysis of international relations in East Asia. Prerequisite: eight upper division credits in political science or permission of the department.
| POL 447-4 Theories of International Political Economy | An examination of the major theories of international political economy, and their application to such issues as the politics of trade, aid, monetary relations, and transnational corporations. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 448-4 Selected Topics in International Relations | Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 449-4 Selected Topics in International Relations II | Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 450-4 Globalization and Regional Politics in Latin America | This seminar, designed for advanced undergraduate and graduate students, will discuss contemporary political issues arising from aspects of globalization, such as free trade agreements, international migration policies, and political reactions to the global media within particular regions of the world. The seminar will expose students to primary data research, and involve the development of a course project in line with their particular interests. Prerequisite: 30 credit hours. POL 450 and LAS 450 are identical and students cannot take both courses for credit. |
| POL 450W-4 Globalization and Regional Politics in Latin America | This seminar, designed for advanced undergraduate and graduate students, will discuss contemporary political issues arising from aspects of globalization, such as free trade agreements, international migration policies, and political reactions to the global media within particular regions of the world. The seminar will expose students to primary data research, and involve the development of a course project in line with their particular interests. Prerequisite: 30 credit hours. POL 450 and LAS 450 are identical and students cannot take both courses for credit. |
| POL 451-4 Public Policy Analysis | Examines the conceptual, philosophical and practical aspects of public policy analysis as it is conducted in government, universities, interest groups and policy research institutes. Specific attention is paid to the question of the role of policy research in the process of public policy making and the design of government programs and services. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 454-4 Urban Public Policy Making | This course will link differing theoretical perspectives and concepts currently used in public policy studies to an understanding of public policy making in urban governance. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 455-4 Issues in Economic and Social Policy | A practical analysis of the evaluation and the adjustment of public policies and programs designed and implemented to address long-standing social and economic concerns. The course will look at governmental and non-governmental actors involved in the processes of policy evaluation. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 457-4 Controversies in Policy Innovation and Design | This course is intended to offer students an opportunity to reflect upon the challenges posed by the development of new technologies, the emergence of new movements and the uncertainties attendant to social and political conflicts associated with policy issues about which experts differ in significant ways. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 458-3 Selected Topics in Local and Urban Governance | Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 459-4 Selected Topics in Governance | Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 481-4 Ethnic Politics and National Identity | Examines the impact of ethnicity on the dynamics and organization of political systems, including the impact of ethnic diversity on modes of political representation, the formation of public policy, and the quest for political stability and national identity. Prerequisite: eight upper division credits in political science or permission of the department. |
| POL 483-4 Political Economy of Latin American Development | This is a survey course which introduces students to the various theoretical approaches which have been used since the 1950s to understand the political economy of Latin American development. It deals with some of the classic theories of modernization, dependency, world systems, and modes of product life analysis. The last unit of the course is devoted to the most contemporary issues of Latin American development, such as the agrarian question, women and development, problems of urbanization and the informal sector. Prerequisite: eight upper division credits in political science or LAS 200 or permission of the department. This course (POL 483) is identical to POL 383, LAS 318, 428, SA 328 and 428, and students cannot take more than one of these courses for further credit. |
| POL 497-4 Directed Practice in Political Science | This course involves interpretation of, and expansion on, practical experience in political life, under the supervision of a single faculty member. Students registering in the course must have their program of practical experience and academic writing assignments approved by both the supervisor and the department's undergraduate committee prior to registration. Prerequisite: Permission of the department; C/GPA of 3.33. Students may count only one POL 497 towards meeting their upper division political science requirements. This course is available only for POL majors. |
| POL 498-4 Directed Readings in Political Science | Directed readings in a selected field of study under the direction of a single faculty member. A paper will be required. Students registering in this course must have their program of readings approved (by the supervising instructor and the undergraduate studies committee) prior to registration. Prerequisite: permission of the department. Students may count only one readings course as credit towards their upper division political science requirements. |
| POL 499-5 Honors Essay | Prerequisite: permission of the department (see regulations listed in the Department of Political Science section). |
| POL 801-5 Theoretical Perspectives in Political Science | Students with credit for POL 813 may not take this course for further credit. |
| POL 802-5 Political Research: Design and Analysis | |
| POL 812-5 Seminar in Modern Political Theory | |
| POL 814-5 Normative Political Theory | |
| POL 821-5 Canadian Government and Politics | |
| POL 825-5 Canadian Political Economy | |
| POL 826-5 Parties and Ideologies in Canada | |
| POL 827-5 Issues in Canadian Government and Politics | |
| POL 829-5 Internship | |
| POL 830-5 Comparative Government and Politics | |
| POL 832-5 Communist and Post-Communist Countries | |
| POL 837-5 Issues in Comparative Politics | |
| POL 838-5 Government and Politics of Industrialized Countries | |
| POL 839-5 Government and Politics of Developing Countries | |
| POL 841-5 International Relations | |
| POL 842-5 International Law and Organizations | |
| POL 843-5 Canadian Foreign Policy | |
| POL 844-5 International Political Economy | |
| POL 845-5 Foreign Policy Analysis | |
| POL 846-5 International Security Studies | |
| POL 849-5 Issues in International Relations | This is a selected topics course. |
| POL 851-5 Public Policy in Canada | |
| POL 852-5 Urban Government and Politics | |
| POL 853-5 Public Administration | |
| POL 855-5 Science, Technology and Public Policy | |
| POL 856-5 Issues in Social and Economic Policy | |
| POL 861-5 Issues in Political Development | Students with credit for POL 837-5 may not take this course for further credit. |
| POL 890-0 PhD Seminar | |
| POL 891-0 Master’s Seminar | |
| POL 892-6 Research Project | |
| POL 893-5 Readings in Political Sciences | |
| POL 894-5 Readings in Political Science II | |
| POL 895-6 Extended Essays | |
| POL 896-6 PhD Comprehensive Exam | |
| POL 897-6 Field Exam in Major Areas of MA Concentration | |
| POL 898-6 MA Thesis | |
| POL 899-6 PhD Thesis Research | |

**Population and Public Health PPH**

**Faculty of Health Sciences**

**PHP 821-3 Concepts and Principles of Population and Public Health**

Introduction to population health paradigms and the history of public health. Understanding the factors that influence health over the lifespan. Measurement and analysis in population health. Fundamentals of public health strategies including health promotion, public policy, disease prevention, communication in health, behavior change, and program planning and evaluation.

**PHP 822-3 Social and Behavioral Contexts of Health and Disease**

Examination of the major social and behavioral variables: social class, poverty, income distribution, gender, race, social networks/support, psychological stress, community cohesion, and the work and neighborhood environment that affect the public’s health. Evaluation of the empirical research linking each construct to population health status. Methods are introduced to operationalize each construct for the purposes of application in public health research.
PPH 823-3 Analysis of Health Care Delivery Systems
Components of health care systems, issues, and interactions between components. System outputs, medical care delivery of primary health care. The Canadian health system and alternatives that impact it or provide better models for delivery. Effecting change, policy development, health system design; criteria for evaluating alternatives. Comparison of different measures of health status; trend analysis for predicting future health care and funding. Components of expenditure.

PPH 860-3 Environmental and Occupational Health
Globalization and industrialization impacts on the health of the environment, populations, and workers. Environmental hazards in consumables (food, air, and water) and waste (liquid, solid, and gaseous) with special reference to hazardous waste. Risk assessment in community, workplace, and residential settings. A case studies approach. Prerequisite: admission to the MSc/PPH program or permission of instructor.

PPH 870-3 Disease Prevention and Control
Infectious and chronic disease prevention and control strategies and program implementation. Components of disease prevention and control programs, including surveillance, epidemic preparedness, immunization, outbreak response. How they apply to specific diseases. A global perspective, including low and middle income countries. Case studies. Prerequisite: Admission to the MSc/PPH program or permission of the instructor.

PPH 880-0 Practicum
Students participate in a workplace practicum placement. Graded satisfactory/unsatisfactory.

PPH 897-3 MSc Project
Graded IP/CO. Prerequisite: PPH 880.

PPH 898-0 Practicum Completion
Prerequisite: PPH 897.

Psychology PSYC
Faculty of Arts and Social Sciences

PSYC X99W-3 Brain, Mind and Society
Introduces the student to issues in Psychology by surveying the research on brain and behaviour and the implications of this work for individuals and society. Beginning with neurons, this course explores the transition to human experience. Writing/Breadth-Science.

PSYC 100-3 Introduction to Psychology I
Acquaints the student with the major issues in contemporary psychology and considers the historical antecedents. Special attention is given to questions of methodology and research design in psychology. Topics in physiological psychology, perception, learning and motivation are considered. Students with credit for PSYC 101 may not take PSYC 100 for further credit. Breadth-Social Sciences.

PSYC 102-3 Introduction to Psychology II
Acquaints the student with major issues in contemporary psychology and considers their historical antecedents. Topics in learning, cognition, social psychology and normal psychology are considered. Prerequisite: PSYC 100. Students with credit for PSYC 101 may not take PSYC 102 for further credit. Breadth-Social Sciences.

PSYC 106-3 Psychological Issues in Contemporary Society
Relates contemporary knowledge from psychology to current social problems. Provides relevant information from studies pertaining to problems such as attitude development, prejudice, race relations, addiction, behavior technology, and family pathology. Breadth-Social Sciences.

PSYC 201W-4 Introduction to Research Methods in Psychology
An introduction to the procedures used in psychological research, and to the logic underlying them. Topics include the strengths and weaknesses of different approaches to research, the formulation of testable questions, the control of extraneous influences, the measurement of effects, and the drawing of valid conclusions from empirical evidence. Provides a background for senior psychology courses since it offers a basis for the critical evaluation and conduct of research. Prerequisite: PSYC 100 and 102 (or PSYC 101). See the Letters of Permission section within the undergraduate Department of Psychology. Writing/Quantitative.

PSYC 207-3 Introduction to History of Psychology
Examines the development of modern psychology from the founding of the first laboratories in the late 19th century to the present. The development and revisions of the major theoretical systems of psychology are examined from a comparative and critical perspective. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 308 may not take PSYC 207 for further credit.

PSYC 210-4 Introduction to Data Analysis in Psychology
Covers basic descriptive and inferential techniques most appropriately applied to the various forms of data from psychological research. Should be completed by majors and honors before the end of semester 4. Prerequisite: PSYC 201 and meet the SFU admissions requirements for quantitative skills competency for students admitted directly from high school. Recommended: BC high school Math 12 or MATH 100 or equivalent. See the Letters of Permission section within the undergraduate Department of Psychology. Quantitative.

PSYC 221-3 Introduction to Cognitive Psychology
Introduction to the study of cognitive and perceptual processes. Topics include memory, perception, attention, language, mental imagery, creativity, judgement and decision-making, and an introduction to cognitive disorders such as Alzheimer's disease, dyslexia, aphasia and attention-deficit disorder. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 320 may not take PSYC 221 for further credit.

PSYC 241-3 Introduction to Abnormal Psychology
Introduces students to the area of abnormal psychology. Topics include the definition and classification of pathological behavior, factors involved in the development of pathology, and evaluation of therapy outcome. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 340 may not take PSYC 241 for further credit.

PSYC 250-3 Introduction to Developmental Psychology
Considers the psychological and physical aspects of human development from conception through middle childhood. Topics include social, emotional, language, cognitive, perceptual and physical development. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 350 or 351 may not take PSYC 250 for further credit.

PSYC 260-3 Introduction to Social Psychology
Examines methodology and content in social psychology. Topics include: attitudes and values; social perception and cognition; social behavior; social inclusion; prejudice, discrimination, and sexism; aggression; altruism, interpersonal attraction and interpersonal relationships. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 360 may not take PSYC 260 for further credit.

PSYC 268-3 Introduction to Law and Psychology
An introduction to the area of law and psychology. The role and influence of psychology in the legal system will be discussed. Includes: social psychology and law, developmental psychology and law, juvenile justice, experimental psychology and law, mental disability and law. Prerequisite: PSYC 100 and 102 (or PSYC 101). Students with credit for PSYC 369 may not take this course for further credit.

PSYC 270-3 Introduction to Theories of Personality
Introduces students to classic and contemporary theories, conceptual debates, and empirical research in the area of personality. Prerequisite: PSYC 100 and 102 (or PSYC 101).

PSYC 280-3 Introduction to Biological Psychology
Surveys the major areas in biological psychology. Topics include the basics of neuroanatomy and nerve cell function, the behavioral and physiological effects of drugs and hormones in the nervous system, evolutionary perspectives on the brain and behavior, and the biopsychology of vision, the chemical senses, hearing, movement, biological rhythms, sex, and cognitive processes. Prerequisite: PSYC 100 and 102 (or PSYC 101). Recommended: BISC 101. Breadth-Science.

PSYC 300W-3 Critical Analysis of Issues in Psychology
Trains students to evaluate critically important issues from the main areas of Psychology (e.g. Biological, Cognitive, Developmental, Law and Psychology, Social, Theory and Methods) and to communicate their ideas clearly in written form. The content may vary in different offerings of the course. Prerequisite: PSYC 100, 102, 201. Writing.

PSYC 301-4 Intermediate Research Methods and Data Analysis
A continuation of PSYC 201 and 210. Provides extensions of the basic theory and methods of research design and data analysis. Includes discussions of the analysis of substantive problems, the choice of appropriate research designs, and special problems that arise in the analysis of psychological data. Prerequisite: PSYC 201 and 210. See the Letters of Permission section within the undergraduate Department of Psychology. Quantitative.

PSYC 303-3 Perception
An introduction to the study of perceptual processes with an emphasis on seeing and hearing. Topics include the perception of features, objects, motion, depth, time, visual illusions, and individual differences in perceptual ability. Prerequisite: PSYC 201, 280, and one of 221 (or 320) or 335.

PSYC 325-4 Memory and Mind
Examination of the phenomena of memory and the retention and reproduction of information. Considers the conditions and principles of retention and recall in short- and long-term memory. Prerequisite: PSYC 201, and 221 (or 320).

PSYC 330-3 Attention
Survey the different aspects of paying attention. Topics include the effects of selective and divided attention on perceptual and cognitive function; the role of attention in human performance; attentional dysfunction and attention-deficit disorder; and the development of attentional capacity across the life span from newborns to the elderly. Prerequisite: PSYC 201, 280 and 221 (or 320).

PSYC 335-3 Sensation I
Examines the properties of the visual, auditory, olfactory, gustatory, and kinesthetic systems and
receptor mechanisms with a strong emphasis on physiology. Topics include psychophysical measurement of sensations, cross-modal organization and computational modeling of sensory processes, including those between sensory and perceptual processes. Prerequisite: PSYC 201, 221, and one of 280 or 303.

PSYC 342-3 Practicum I
First semester of work experience in the Psychology Co-operative Education program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: PSYC 201 and 210. Students should apply to the co-op co-ordinator one semester in advance.

PSYC 343-3 Practicum II
Second semester of work experience in the Psychology Co-operative Education program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of PSYC 342 and 45 credit hours with a minimum CGPA of 3.0.

PSYC 354-3 Development of Children's Thinking
Examines research and theory concerning the origins and development of cognition in humans. The development of language and children's thinking about the physical and social world from birth to adulthood, with a focus on infancy and childhood. Prerequisite: PSYC 201 and 250 (or 350 or 351).

PSYC 355-3 Adolescent Development
Considers human development from the end of childhood to the beginning of the adult stage, from a bi-social point of view. Included among the topics are psychological effects of sexual maturation, choice of vocational partner, effects of participation in the gang and youth organization, cultural variations in the patterns of growth. Prerequisite: PSYC 201 and 250 (or 350 or 351).

PSYC 356-3 Developmental Psychopathology
Examines theoretical approaches, research findings, and treatment outlooks concerning problems and disorders in childhood development. Prerequisite: PSYC 201, 241 (or 340), and 250 (or 350 or 351).

PSYC 357-3 Adulthood and Aging
Considers human development from young adulthood to old age. Included are theories of adult development and aging; endocrine and biological factors in aging; and the effects of aging on sensation, perception, learning, cognition, personality, psychopathology, and social relations. Prerequisite: PSYC 201 and 250 (or 350 or 351); or acceptance into the diploma program in gerontology.

PSYC 358-3 Language and Social Interaction
Reviews the four major psychological models of talk and develops a new social pragmatic model of talk-as-social-interaction. The social pragmatic model is then applied to research in social development. Through lectures, course readings, and hands-on exercises in the tutorials (e.g., tape recording, transcription and analysis of natural talk) students will acquire competence in describing and analyzing talk from a social pragmatic perspective, and applying social pragmatics to an examination of central issues in social development. Prerequisite: PSYC 201 and 250; (or one of PSYC 350 or 351). Students who have taken PSYC 367 may not take this course for further credit.

PSYC 362-3 Close Relationships
Reviews theory and research on the psychology of interpersonal relations with particular attention to personal relationships. Topics include theoretical perspectives on relationships; interpersonal attraction; dating, marriage, and friendship; social networks; cognitive processes and communication dynamics within relationships; and power and aggression within relationships. Prerequisite: PSYC 201 and 260 (or 360).

PSYC 363-3 Intergroup Relations
Provides an overview of the social psychological study of intergroup relations, considering classic and contemporary theory and research in the field. It includes discussions of the application of these ideas and findings to important social contexts, and explores ways in which the social psychological study of intergroup relations can help us understand and inform efforts to influence relevant social change. Prerequisite: PSYC 201 and 260 (or 360).

PSYC 365-3 Health Psychology
Explores applications of psychological principles to health and health care. The development of the field of health psychology is traced and major topics introduced. Topics include health promotion, the hospital experience, communication in medical settings, coping with serious illness, psychoneuroimmunology, and field-specific methodology. Prerequisite: PSYC 201 and 260 (or 360).

PSYC 371-3 Intervention: Process and Outcome
Reviews the major approaches to psychological intervention in terms of theory, practice and outcome evaluation. The course will examine both the scientific and practitioner components of intervention. Prerequisite: PSYC 201 and two of 241 (or 340), or 270 (or 370). Students with credit for PSYC 375 may not take PSYC 371 for further credit.

PSYC 376-3 Experimental Psychology and Law
The roles of experimental developmental, cognitive, and social psychology in the understanding of behavior and perceptions of individuals in legal contexts. Topics include eyewitness testimony, autobiographical memory, interviewing, interrogation, deception detection, and juror decision-making. Prerequisite: PSYC 201 and 268. PSYC 210 and 325 are recommended. Students who have taken PSYC 368 may not take this course for further credit.

PSYC 379-3 Clinical Forensic Psychology
Clinical approaches to the understanding of behavior in criminal and civil forensic settings. Topics related to the assessment, treatment, and management of people suffering from mental disorder. Prerequisite: PSYC 201 and 268. PSYC 241 is recommended. Students who have taken PSYC 368 may not take this course for further credit.

PSYC 381-3 Behavioral Endocrinology
Examines the neurophysiological bases of cognitive performance with measurement techniques between mind and body and the empirical and rational foundations of scientific thought as applied to psychology. Topics include psychological disorders. Prerequisite: PSYC 201 and 280. Students with credit for PSYC 483 may not take PSYC 383 for further credit.

PSYC 384-3 Developmental Psychobiology
A survey of research on normal and abnormal brain development and its behavioral consequences, covering the fetal period through old age. Genetic, prenatal, nutritional, and experiential effects on brain and behavior will be discussed. Topics to include: bio-developmental aspects of sensory-motor, social, linguistic, intellectual, and sexual behavior; effects of head trauma, disease, abnormal environments, and aging will also be covered. Prerequisite: PSYC 201 and 280. Recommended: PSYC 250.

PSYC 385-3 Evolutionary Psychology
Topics such as altruism, parental care, mate choice, sex differences in behavior, aggression, dominance and territoriality are considered from an evolutionary perspective. The role of heredity and environment in the development of these behaviors is also discussed. Prerequisite: PSYC 201.

PSYC 386-4 Laboratory in Behavioral Neuroscience
An overview of techniques used for studying the biological basis of behavior in humans and animals. Examines the logic and limitations of specific research methods. Provides an opportunity to master a set of techniques and to conduct supervised research projects in the laboratory. Prerequisite: PSYC 201 and 280. Students with credit for PSYC 481 may not take PSYC 386 for further credit.

PSYC 387-3 Human Neuropsychology
Examines the neural processes that underlie cognitive functioning and behavior. Topics include neuroanatomy, neuropathology, brain damage, neurological diseases (e.g., schizophrenia, Alzheimer's, Parkinson's), and problems in spatial ability, memory, language, mood and anxiety. Prerequisite: PSYC 201, 221, and 280.

PSYC 388-3 Biological Rhythms and Sleep
Behavior and physiology are regulated by biological clocks, which function to synchronize the organism optimally with its environment. In this course we examine the adaptive role of clocks in animal behavior, the neural and endocrine mechanisms of daily, monthly and yearly rhythms, and the relevance of clocks, rhythms and sleep to human performance and psychopathology. We will also consider the mechanisms and functions of sleep states. Prerequisite: PSYC 201 and 280. Students with credit for PSYC 488 may not take PSYC 388 for further credit.

PSYC 402-4 Selected Topics in History and Theoretical Psychology
Examines the basic ideas concerning the relationship between mind and body and the empirical and rational foundations of scientific thought as applied to modern psychology. Students will be expected to analyze either the historical development of contemporary approaches or theoretical issues that are relevant to their area of interest in psychology. Prerequisite: PSYC 201 and 207 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

PSYC 410-4 Research Design I
Reviews the basic logic of controlled experimentation, and focuses on analysis of variance designs commonly used in psychological research. Prerequisite: PSYC 201 and 207 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

PSYC 411-4 Research Design II
Focuses on multivariate regression and correlation models. Deals with ways of asking questions when direct experimental manipulation is not feasible.
and demonstrates the utility of the principles involved for solving problems other than those for which they were first proposed. Prerequisite: PSYC 201, 210, 301, and 60 hours of credit with a CGPA of 3.0 or 90 hours credit with a CGPA of 2.5. Recommended: PSYC 410. Quantitative.

**PSYC 415-4 Selected Topics in Measurement** An intensive exposure to selected topics in measurement theory and psychometrics including, e.g., advanced classical test theory, modern test theory, and factor analysis. The content will vary offering to offering. Prerequisite: PSYC 301 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA. Recommended: PSYC 410 and 411.

**PSYC 430-4 Selected Topics in Cognition I** Prerequisite: PSYC 201, 210, 221 (or 320), 280, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 432-4 Selected Topics in Cognition II** Prerequisite: PSYC 201, 210, 221 (or 320), 280 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 441-4 Selected Topics in Clinical Psychology** An intensive examination of a selected topic in clinical psychology, varying to include offerings such as psychopathology (adult or child), individual differences in cognitive abilities, behavioral approaches to intervention, addiction, and other special topics. Prerequisite: PSYC 201, 210, 371 (or 375) and 60 hours of credit and a GPA of 3.0, or 90 hours of credit and a GPA of 2.5. Students with credit for PSYC 444 may not take PSYC 441 for further credit if similar topics are covered. See department for further information.

**PSYC 442-3 Practicum III** Third semester of work experience in the Psychology Co-operative Education program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of PSYC 342 and 343 and 60 semester hours with a minimum CGPA of 3.0.

**PSYC 443-3 Practicum IV** Fourth semester of work experience in the Psychology Co-operative Education program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of PSYC 442 and 75 semester hours with a minimum CGPA of 3.0.

**PSYC 450-4 Selected Topics in Developmental Psychology I** Prerequisite: PSYC 201, 210, 250 (or 350 or 351), 354, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 451-4 Selected Topics in Developmental Psychology II** Prerequisite: PSYC 201, 210, 250 (or 350 or 351), 354, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 452-4 Selected Topics in Developmental Psychology III** Prerequisite: PSYC 201, 210, 250 (or 350 or 351), 354, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 453-4 Selected Topics in Developmental Psychology IV** Prerequisite: PSYC 201, 210, 250 (or 350 or 351), 354, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 461-4 Topics in Social Psychology I** Prerequisite: PSYC 201, 210, 260 (or 360), 361 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 462-4 Topics in Social Psychology II** Prerequisite: PSYC 201, 210, 260 (or 360), 362 and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 463-4 Topics in Social Psychology III** Prerequisite: PSYC 210, 260 (or 360), 363, 90 credit hours and a CGPA of 3.0.

**PSYC 464-4 Topics in Social Psychology IV** Prerequisite: PSYC 210, 260 and 90 credit hours and a CGPA of 3.0.

**PSYC 476-4 Topics in Psychosocial Psychology I** Prerequisite: PSYC 376. Students who have taken PSYC 468 may not take this course for further credit.

**PSYC 477-4 Topics in Psychosocial Psychology II** Prerequisite: PSYC 376. Students who have taken PSYC 468 may not take this course for further credit.

**PSYC 479-4 Topics in Psychosocial Psychology III** Prerequisite: PSYC 379. Students who have taken PSYC 468 may not take this course for further credit.

**PSYC 480-4 Selected Topics in Biological Psychology I** Prerequisite: PSYC 201, 210, 221, 280, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 482-4 Selected Topics in Biological Psychology II** Prerequisite: PSYC 201, 210, 221, 280, and 60 credit hours and a 3.0 CGPA or 90 credit hours and a 2.5 CGPA.

**PSYC 490-4 Honors Project** An in-depth investigation of a topic in psychology, culminating in a critical literature review and the formulation of a research proposal. Prerequisite: PSYC 301 with a minimum grade of C.

**PSYC 491-3 Selected Topics in Psychology** Prerequisite: permission of the department.

**PSYC 492-5 Selected Topics in Psychology** Prerequisite: permission of the department.

**PSYC 493-495-3 Directed Studies** Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: Permission: Permission of the department. See the Directed Studies Courses section within the undergraduate Department of Psychology section.

**PSYC 499-6 Honors Project** The research proposed in PSYC 490 is executed and the results are written up in thesis format. Prerequisite: PSYC 490.

**PSYC 500-3 Biological Bases of Behavior** PSYC 601-3 Cognitive and Affective Bases of Behavior

**PSYC 502-3 Developmental and Social Bases of Behavior** PSYC 603-3 Individual Differences

**PSYC 503-3 Professional Issues in Psychology** PSYC 705-3 Proseminar in History and Systems

**PSYC 715-1.5 Proseminar in Measurement** PSYC 720-3 Proseminar in Learning

**PSYC 725-3 Proseminar in Cognition** PSYC 730-3 Proseminar in Perception

**PSYC 740-3 Proseminar in Motivation** PSYC 744-3 Proseminar in Psychopathology

**PSYC 750-3 Proseminar in Developmental Psychology** PSYC 760-3 Proseminar in Social Psychology

**PSYC 770-3 Proseminar in Personality** PSYC 780-3 Proseminar in Physiological Psychology

**PSYC 785-3 Proseminar in Animal Behavior** PSYC 790-3 Proseminar in Law and Psychology

**PSYC 804-3 Seminar in Evaluation** PSYC 806-3 Advanced Topics in Assessment

**PSYC 807-3 Advanced Topics in Intervention: Child Therapy** Current theoretical and empirical issues in the area of child and adolescent therapy. Prerequisite: PSYC 820, 821, 822, 823, 824 or permission of the instructor.

**PSYC 807-3 Advanced Topics in Intervention: Family Therapy** Provides an overview of the current theoretical and empirical issues in the area of family therapy. Prerequisite: PSYC 820, 821, 822, 823, 824 or permission of the instructor.

**PSYC 807-3 Advanced Topics in Intervention: Group Therapy** Conceptual and theoretical issues in group therapy. Prerequisite: PSYC 820, 821, 822, 823, 824 or permission of the instructor.

**PSYC 807-3 Advanced Topics in Intervention: Marital Therapy** Conceptual and theoretical issues in Marital Therapy. Prerequisite: PSYC 820, 821, 822, 823, 824 or permission of the instructor.

**PSYC 808-3 Advanced Topics in Evaluation** PSYC 820, 821, 822, 823, 824, or permission of the instructor.

**PSYC 809-3 Advanced Topics in Applied Psychology** Prerequisite: PSYC 820, 821, 822, 823, 824, or permission of the instructor.

**PSYC 810-3 Seminar in Social Psychology and Law** Prerequisite: PSYC 790.

**PSYC 815-3 Mental Health Law and Policy** Prerequisite: PSYC 790.

**PSYC 819-3 Ethics and Professional Issues** Prerequisite: graduate program standing. Graded on a satisfactory/unsatisfactory basis.

**PSYC 820-3 Seminar in Individual Assessment** Prerequisite: admission to the clinical program or permission of the instructor.

**PSYC 821-2 Practicum in Individual Assessment** Corequisite: registration in PSYC 820, graduate standing in the clinical program, or permission of the instructor. Graded on a satisfactory/unsatisfactory basis.

**PSYC 822-3 Seminar in Intervention** Prerequisite: graduate standing in the clinical program, or permission of the instructor.

**PSYC 823-2 Practicum in Intervention** Prerequisite: registration in PSYC 822, graduate standing in the clinical program, or permission of the instructor. Graded on a satisfactory/unsatisfactory basis.

**PSYC 824-3 Research Issues in Psychology** Prerequisite: Admission to the Masters or Doctoral program.

**PSYC 825-2 Intervention (Ongoing)** Prerequisite: admission to the clinical program. Required every semester prior to internship except when granted ‘on leave’ status from PSYC 825, or when registered in PSYC 880 and also inactive at the
Clinical Psychology Centre (CPC). Graded on a satisfactory/unsatisfactory basis.

PSYC 830-3 Seminar in Child Evaluation and Treatment Formulation
Prerequisite: PSYC 750, 820.

PSYC 831-2 Practicum in Child Evaluation and Treatment Formulation
Prerequisite: PSYC 750, 820. Corequisite: PSYC 830.

PSYC 835-3 Special Topics in Civil Forensic Psychology
Prerequisite: PSYC 790, 815.

PSYC 836-3 Special Topics in Criminal Forensic Psychology
Prerequisite: PSYC 790, 815.

PSYC 860-5 Social Psychology
PSYC 870-3 Personality
PSYC 880-3 Practicum
Full-time clinical work for four months in an approved setting. Prerequisite: PSYC 744, 770, 820, 821, 910, 911. Graded on a satisfactory/unsatisfactory basis.

PSYC 881-3 Senior Practicum
Prerequisite: admission to the doctoral clinical program. Graded on a satisfactory/unsatisfactory basis.

PSYC 882-3 Neuropsychology Practicum
Prerequisite: admission to the clinical program with a specialization in neuropsychology. Graded on a satisfactory/unsatisfactory basis.

PSYC 883-3 Practicum III
PSYC 884-3 Practicum IV
PSYC 886-9 Internship
Full-time clinical work for 12 months in an approved setting. Prerequisite: equivalent of the MA clinical program. Three PhD level courses, successful completion of the PhD comprehensive examinations, and successful defense of the PhD research proposal. Graded on a satisfactory/unsatisfactory basis. Registration in PSYC 886 must be continued for a total of three consecutive semesters.

PSYC 890-3 Practicum in Clinical Forensic Psychology
Prerequisite: PSYC 790, 835 or 836.

PSYC 892-3 Research/Policy Practicum in Law and Psychology
Prerequisite: PSYC 790.

PSYC 897-3 Research Project/Law & Psych/Forensic Psych
Prerequisite: PSYC 790.

PSYC 898-6 MA Thesis
PSYC 899-6 PhD Thesis
PSYC 905-3 Seminar in History
PSYC 907A-3 Advanced Topics in Biological Psychology: Mental Health Disorders
PSYC 907B-3 Neurocognitive Disorders
PSYC 907C-3 Advanced Topics in Biological Psychology: Neuropsychology of Recovery
PSYC 907D-3 Advanced Topics in Biological Psychology: Cognitive Aging and Dementia
PSYC 907E-3 Advanced Topics in Biological Psychology: Psychopharmacology
PSYC 907F-3 Advanced Topics in Biological Psychology: Cognitive Neuroscience
PSYC 910-3 Research Design I: Experiments
Reviews the basic logic of controlled experimentation, and focuses on analysis of variance designs commonly used in psychological research. Particular emphasis is given to the relative merits of the several designs when there are multiple research questions to be answered.

PSYC 911-3 Research Design II: Research Studies
Focuses on multivariate regression and correlation models. Deals with ways of answering questions when direct experimental manipulation is not feasible, and emphasizes new applications.

PSYC 912-914-1.5 Research Seminar
PSYC 915-3 Seminar in Measurement
PSYC 916-918-1.5 Research Seminar
Research seminars are designed specifically to enable graduate students in Psychology to plan, execute, and analyse research including that leading to MA and PhD degrees. The seminars will provide directions for future research, critical discussion of pending designs, aid in resolving problems in ongoing studies, and alternative interpretations of results of completed projects. The research seminar courses are graded on a satisfactory/unsatisfactory basis.

PSYC 920-3 Seminar in Learning
PSYC 923-3 Seminar in Cognitive Processes
PSYC 935-3 Seminar in Sensation
PSYC 940-3 Seminar in Motivation-Emotion
PSYC 944-3 Seminar in Psychopathology
PSYC 950-3 Seminar in Developmental Psychology
PSYC 960-3 Seminar in Social Psychology
PSYC 965-3 Seminar in Psycholinguistics
PSYC 970-3 Seminar in Personality
PSYC 980-3 Biological Psychology
PSYC 985-3 Seminar in Animal Behavior
PSYC 990-3 Seminar in Law and Psychology
Prerequisite: PSYC 790.

PSYC 997-3 Directed Studies
PSYC 998-3 Directed Readings
Prerequisite: admission to the masters or doctoral program.

PSYC 999-6 PhD Comprehensive Examination
All students in the experimental and clinical psychology PhD programs are required to successfully complete the comprehensive exam.

Public Policy Program MPP
Faculty of Arts and Social Sciences

MPP 800-5 Introduction to Public Policy Issues
An introduction to a range of contemporary public policy issues that is designed to illustrate the complexity of good analysis and also to introduce alternative techniques of analysis. The course format is seminar presentations on topics linked to case studies introduced in other core courses in the MPP program. Seminars are presented by faculty, analysts from the public policy community, and students.

MPP 801-5 Economic Foundations of Policy Analysis I
An examination of the basic operation of a market economy and introduction to key economic concepts and techniques.

MPP 802-5 Economic Foundations of Policy Analysis II
Application of economic concepts and techniques to a variety of public policy issues.

MPP 803-5 Political Foundations of Policy Analysis I
The first of a two semester sequence that examines the basic structures and processes of government in Canada and their context in the evolving Canadian political economy. It also introduces students to key actors in the policy process and examines their structure and behavior. Examples of relevant actors include federal, provincial and local state structures and agencies, and a variety of societal actors such as pressure groups, social movements, think tanks and other associations.

MPP 804-5 Political Foundations of Policy Analysis II
Building upon MPP 803, this course provides a detailed examination of the policy process i.e. the stages through which public policies are developed. The course outlines the nature of the policy cycle and examines the formal and informal institutions and rules that affect policy actors in their deliberations and decisions. Specific attention is paid to the nature of policy communities and policy networks in Canada and their impact upon policy content and policy change.

MPP 805-5 Research Techniques and Quantitative Methods I
Research techniques will include survey design, implementation and analysis, statistical inference, and qualitative methods of analysis.

MPP 806-5 Research Techniques and Quantitative Methods II
Application of statistical quantitative methods for policy analysis, including analysis of variance, and regression techniques.

MPP 807-5 Introduction to Policy Analysis
An introduction to techniques of public policy analysis, evaluation, and simulation techniques. Group projects on current public policy issues will constitute a major portion of this course.

MPP 808-5 Advanced Policy Analysis I
Advanced policy analysis techniques, public affairs, communication, and client interaction are covered and applied by students to individual projects on current public policy issues. This course will constitute the project component of the program.

MPP 809-5 Advanced Policy Analysis II
Advanced policy analysis techniques are covered and applied by students to individual projects on current public policy issues. This course will constitute the project component of the program. Students are required to present and defend their projects in this course.

MPP 810-5 Issues in Public Policy I
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 811-5 Issues in Public Policy II
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 812-5 Selected Topics in Public Policy I
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 813-5 Selected Topics in Public Policy II
Specialized study in topics germane to the field of public policy.

MPP 814-5 Selected Topics in Public Policy III
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 815-5 Selected Topics in Public Policy IV
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 816-5 Selected Topics in Public Policy V
This course provides an opportunity to cover topics appropriate to the program but not covered extensively in the core courses.

MPP 825-5 MPP Directed Readings I
MPP 826-5 MPP Directed Readings II
MPP 850-0 MPP Internship
Students who do not have prior work experience in public policy are placed in a public or private organization connected to public policy. The work they undertake must be of sufficient depth and breadth to
allow the student the opportunity to demonstrate his or her acquired knowledge and skills. Students will be required to produce a work report that will be an appraisal of the student’s work experience.

**Publishing Program PUB**

**Faculty of Arts and Social Sciences**

**PUB 600-4 Topics in Publishing Management**
An analysis of management issues essential to the daily operation of publishing firms. Emphasis will be placed on the distinction between characteristics of publishing as a cultural/information industry, the applicability of theory and practice in marketing and accounting and the legal underpinnings of publishing. Prerequisite: admittance to the program.

**PUB 601-4 Editorial Theory and Practice**
The theoretical component of this course focuses on theories of composition and rhetoric. The practical component focuses on the various types of editing that take place in publishing. Students are examined on both the theory and their attained competence in editing. Prerequisite: admittance to the program.

**PUB 602-4 Design and Production Control in Publishing**
A consideration of the theory, principles, traditions and current trends in publication design as applied to print and electronic publishing. Students will undertake design exercises in addition to learning the relationship between design, costing and print production. Prerequisite: admittance to the program.

**PUB 605-5 Book Publishing Project**
Students are assigned to groups (simulated book publishing companies) and are given a company profile for which they develop a season’s titles. They form a team based on industry roles: publisher, editor, subrights manager, production manager, art director, promotion and marketing manager. Each team produces the editorial profile, costing and marketing plans for the list, designs the covers and makes a final presentation to an industry panel.

**PUB 606-4 Magazine Publishing Project**
Students are assigned to groups and form a team based on common roles in the industry: publisher, comptroller, editor, production manager, art director, advertising director, marketing and distribution manager. In consultation with faculty and industry speakers the team develops a magazine concept, creates a business plan including cost projections, and identifies the readership demographics and potential. Descriptions are produced and a final presentation made to an industry panel.

**PUB 607-4 Publishing Technology Project**
Students work in a team environment to explore particular publishing technologies that have yet to achieve widespread industry use. The teams design and develop a working implementation and produce documentation and written specifications on that implementation for industry review.

**PUB 800-4 Publishing Industry Structure, Functioning and Policy**
An examination of the contemporary state and developing trends in the Canadian publishing industry. Emphasis is placed on book publishing, business dynamics, government policy, and international trade. Attention is also given to magazine and online publishing and comparisons with other countries are drawn. Prerequisite: admittance to the program.

**PUB 801-4 History of Publishing**
A consideration of publishing from the time of Gutenberg to the present day including discussion of the medium of print and its influence on human expression and thought. Emphasis will be placed on the role of publishing and publishing policies in society. Prerequisite: admittance to the program.

**PUB 802-4 Technology and the Evolving Form of Publishing**
An examination of the nature of technology and the social, cultural, legal, economic and political implications of techniques of expression and business forms, publication formats, markets, policies and especially technology. Opportunities for Canadian publishing in domestic and global markets will be emphasized. Prerequisite: admittance to the program.

**PUB 897-6 Internship Project Report**
Completion and evaluation of the Internship Project Report. Students complete their internship project report and work with their supervisory committee to bring it to a final acceptable form.

**PUB 898-6 Internship Project Report Supervision and Evaluation**
Students receive hands-on experience in the application of simulation modeling to research and assessment. Prerequisite: at least one of PUB 311, BISC 304, BISC 310, BISC 404, GEOG 315, or GEOG 316.

**REM 471-3 Forest Ecosystem Management**
Students will examine the problems of managing forest ecosystems for a variety of societal goals and objectives. The course will start with an examination of the ecological characteristics of forest ecosystems and their dynamics. The second section will focus on the objectives and tools of forest management in an ecological context. The final section of the course will focus on the institutions, economics and policies of forest management, with a focus on British Columbia’s historical and current management issues. This course will involve lectures, group discussions, field trips, and exercises. Prerequisite: at least one of REM 311, BISC 304, BISC 310, BISC 404, GEOG 315, or GEOG 316.

**REM 601-5 Social Science of Natural Resources Management**
An introduction to the relevance of social science perspectives, data and analytical tools in resource management, especially as these complement, supplement or critique perspectives from natural science or economics.

**REM 602-5 Natural Resource Management II: Advanced Seminar**
A professional group workshop course focusing on specific resource and environmental problems. Prerequisite: eight REM courses or permission of instructor.

**REM 609-5 Evaluation of Management Strategies for Living Resources**
This course examines living-resource management as a control system, including open loop (set point) control, closed loop (feedback) control, passive and active adaptive management. We explore the processes for the design of living-resource management systems, including interpreting policy as operational objectives, iterative development and stakeholder consultation, assessment methods, decision rules, evaluation using closed loop simulations, performance measures, trade-off between multiple objectives and methods for the presentation of results. The course includes a laboratory project to evaluate a management approach for a selected resource using computer simulations. Prerequisite: REM 611, 612 or 613 or permission of instructor.

**REM 610-5 Applied Environmental Toxicology and Environmental Management of Contaminants**
A study of the environmental behavior and toxic effects of chemical substances in the environment and the application of methodologies for their assessment and management.

**REM 611-5 Population and Community Ecology**
A review of population, community, and ecosystem ecology; implications of these areas for methods of resource management and environmental assessment.

**REM 612-5 Simulation Modelling in Natural Resource Management**
Methods of constructing simulations models and analyzing them through sensitivity analysis. Application of simulation modelling to research and management of environmental and resource systems.
Topics will include management of wildlife, forests, insect pests, fisheries, pollution problems, energy resources, and recreational land use. Prerequisite: REM 611 or permission of the instructor.

REM 613-5 Methods in Fisheries Assessment
Introduction to fishing methods, fisheries ecosystems and the effect of fishing. Application of models of fish population dynamics, methods of data analysis and the quantification of uncertainty. Introduction to selected methods for providing scientific advice on the overexploitation of fish stocks. Focus will be primarily on biological aspects of fisheries assessment while illustrating how these interface with economic, social and institutional concerns of managers.

REM 614-5 Advanced Methods in Fisheries Assessment
Combining fish population dynamics with statistical estimation to provide quantitative assessments of the status of fish populations and fisheries. The course builds upon REM 613 by developing a broader range of biological and mathematical models of fish population dynamics and fisheries management procedures, as well as approaches for testing the reliability of these methods. Lab tutorial sessions develop quantitative models, estimation, and simulation approaches for performance and stock assessment methods that are currently applied in fisheries and wildlife management. Prerequisite: REM 613 or permission of instructor.

REM 621-5 Ecological Economics
Introduction to economic concepts for management of the environment and specific natural resources. Key issues are definitions of sustainability, the substitution capability between human-made and natural capital, and the appropriate application of economics to sustainable development analysis and policies.

REM 625-5 Risk Assessment and Decision Analysis for Management of Natural Resources
Use of quantitative methods of risk assessment and decision analysis to explicitly take uncertainty into account when making decisions in management of natural resources. Methods of quantifying uncertainty and the resulting risks. Examples from management of forests, wildlife, fisheries, water resources, energy, and toxic chemicals. Communicating information about uncertainties and the resulting risks to resource management planners and scientists. Advantages and limitations of various quantitative methods. Includes computer laboratories. Prerequisite: permission of instructor.

REM 631-5 River Basin Analysis, Planning and Management
A review of geomorphic and hydrologic principles; the morphometric and statistics of fish stocks; selected case studies of impact assessment and river restoration.

REM 632-5 Terrain Evaluation
The extensive classification of a landscape based on geology, geomorphology, soils, vegetation, historic and current land use, and the assessment of qualitative values as an aid to multiple land use management.

REM 633-5 Introduction to Remote Sensing and Aerial Photographic Interpretation
The application of these techniques in the acquisition and display of selected source data. Topics include air photo interpretation, multi-band photography, thermal infrared imagery, satellite imagery, orthophotography, topographic and thematic mapping, and computer cartography.

REM 636-5 Applications of GIS in Resource and Environmental Management
For students to understand the "general principles, opportunities, and pitfalls of recording, collecting, storing, retrieving, analyzing, and presenting spatial information" as it pertains to resource and environmental management.

REM 641-5 Law and Resources
A study of legal interventions related to resource planning and environmental control. The course looks at several aspects of environmental and recourse law including administrative and constitutional law, fisheries and forestry regulation, and native rights.

REM 642-5 Regional Planning I
Theory and techniques of regional analysis; planning models and their application to key resource sectors.

REM 643-5 Environmental Conflict and Dispute Resolution
This course examines theoretical aspects of conflict and dispute resolution in natural resource management settings and is designed to assist students in understanding the nature of environmental conflict and the role of environmental dispute resolution (EDR) techniques.

REM 644-5 Public Policy Analysis and Administration
Analysis of methods of policy-making and problem solving with particular emphasis on natural resource issues. Topics include goal setting, problem definition, program scheduling, policy evaluation, policy implementation and public administration. A practical analysis of the structure and processes surrounding major contemporary policy issues.

REM 645-5 Resource Development Communities
Examination of the impact of resource developments on communities in Canada. An overview of the social organization of resources-based communities and an analysis of the participatory process in decision making in resource management.

REM 646-5 Environmental and Social Impact Assessment and Environmental Management Systems
Evaluation and application of current methodologies for social, economic, and biophysical impact assessment and the ISO 14001 standard for environmental management systems.

REM 647-5 Parks and Outdoor Recreation Planning
The course examines a combination of both ecological and market-based resource assessment and planning techniques for conservation and use of parks, forests, and recreation areas. Visitor behavior and management in recreation and protected areas settings will be examined.

REM 648-5 The Tourism System
This course will examine the social, environmental and economic components of tourism. Topics will include theoretical concepts and elements of tourism, historical evolution, spatial patterns, and case studies of tourism development in various parts of the world. Discussion of tourism planning and management will focus on the development of tourism as a renewable resource.

REM 649-5 Tourism Planning and Policy
The course provides frameworks and methodologies for understanding the policy and planning initiatives of public and private sector organizations. Foundations for resource assessment, market analysis, product-market matching and regional tourism strategy development are explored in detail. Prerequisite: permission of instructor.

REM 650-5 Energy and Materials Management and Policy
Management strategies and policies to achieve sustainable flows of energy and materials in the economy. Eco-efficiency strategies reduce these flows while resource substitution strategies seek more environmentally benign flows. Applies expertise from economics, ecology, thermodynamics, engineering, geology and behavioral sciences.

REM 651-5 Project Evaluation and Non-market Valuation Methods
This course extends environmental and ecological economics concepts to the field of project appraisal and non-market valuation. Includes the methods and limitations of standard cost-benefit analysis (CBA), as well as new techniques in the valuation of non-market environmental resources and ways to incorporate non-market valuation such as the depletion of natural resources in project work. The course concludes with treatment of a number of alternatives to CBA, including multi-attribute techniques and the precautionary principle. Prerequisite: ECON 200, REM 621, or permission of instructor.

REM 652-5 Community Tourism Planning and Development
The course critically examines approaches employed by communities incorporating tourism into their development strategies. Techniques for optimizing the resource potential of communities from economic, social, cultural and environmental perspectives are explored with a view toward developing policies for ‘appropriate’ community tourism. Prerequisite: permission of instructor.

REM 655-5 Water Planning and Management
Evaluation of theoretical models and management experiences; federal, provincial and international institutional arrangements and jurisdictional responsibilities; emerging problems and opportunities. This is primarily a field course in which water and environmental management systems in British Columbia are compared with those in the states of Washington, Oregon, and California.

REM 658-5 Energy and Materials Systems Modeling
Theory, background, and practical experience in the use of a range of techniques for policy modelling of energy and materials flows in society with the aim of demonstrating how more environmentally and socially sustainable trajectories can be achieved. Techniques include: simulation modelling, optimization modelling, econometric and other forms of parameter estimation, input-output modelling, game playing models, and integrated systems models. Prerequisite: permission of instructor.

REM 660-5 Special Topics in Natural Resources Management
Special topics in areas not currently offered within the offerings of the resource and environmental management program.

REM 661-663-5 Special Topics in Resource and Environmental Management
Special topics in areas not currently offered within the offerings of the resource and environmental management program.

REM 664-5 Directed Studies
Special topics in areas not currently offered within the offerings of the resource and environmental management program.

REM 670-5 Introduction to Forestry
Examines the theory and practice of forest management based on an understanding of the linkages between forest ecosystem dynamics, economics, policy and social management. Principles are illustrated with reference to contemporary forestry issues. Prerequisite: REM 611 or permission of instructor.

REM 671-5 Forest Ecology
Structure, function and development of forest ecosystems. Population, community, ecosystem and landscape approaches are used to enable students to understand the biology and management of forests in terms of the processes driving spatial and temporal dynamics.
REM 672-5 Silviculture
Principles and practice of silviculture; lecture and laboratory, with added emphasis on the state of the art in British Columbia. Prerequisite: REM 671, equivalent course, or permission of instructor.

REM 690-0 Practicum I
First semester of work experience in the School of Resource and Environmental Management's Co-operative Education Program.

REM 691-0 Practicum II
Second semester of work experience in the School of Resource and Environmental Management's Co-operative Education Program. Prerequisite: students must have completed at least one semester's courses and permission of REM's co-op coordinator.

REM 698-3 Field Resource Management Workshop
An intensive field course introducing students to the diversity of issues and viewpoints concerning management of natural resources. Problem areas will include forestry, mining, fisheries and wildlife management, energy, recreation and land use planning.

REM 699-10 Research Project
A research project dealing with a specific interdisciplinary problem in resource management, administration or allocation. The study must result in the preparation of a formal paper and the presentation of a seminar.

REM 801-5 Principles of Research Methods
Students will develop skills and insight into the design, implementation and analysis of interdisciplinary research in natural resource and environmental management. This will help prepare students to carry out their own research projects. Students who entered REM during or prior to the fall 1994 semester and who have received credit for any one of MRM 601, 611 or 621 may not take REM 801 for credit.

REM 802-5 Research Approaches for REM PhD Students
This course is designed for all REM PhD students, although considerable course material may be of interest and value to other REM students. The course will emphasize preparing PhD students for their breadth comprehensive exams by discussing and evaluating various viewpoints in published debates related to the three topical areas of comprehensive exams: resource and environmental economics, policy and planning and environmental science. The course will also cover planning and carrying out the PhD research, as well as effectively communicating research results.

REM 899-10 PhD Thesis

Science SCI
Faculty of Science

SCI 300-3 Science and its Impact on Society
The impact of science in our society. This course introduces upper level university students to all facets of science and their resulting technologies. Governmental policies often involve far-reaching scientific/technological decisions and this course attempts to provide a scientific perspective to help achieve rational and effective policies. Prerequisite: 60 credit hours. Not open to students in the Faculty of Science or the Schools of Computing Science, Engineering Science and Kinesiology. Breadth-Science.

Sociology and Anthropology SA
Faculty of Arts and Social Sciences

SA 100-4 Perspectives on Canadian Society (SA)
An examination of Canadian society from the perspective of the social sciences – an introduction both to the nature of Canadian society and to the use of sociological and anthropological concepts applied to the analysis of Canadian societies in general. This course is meant to appeal to those who specifically wish to expand their knowledge of Canadian Society, and also to those who may be considering further work in sociology and anthropology. Topics to be considered include class structure, the nature of Canada’s population, regional variation, gender relations, multiculturalism, native issues. Breadth-Social Sciences.

SA 101-4 Introduction to Anthropology (A)
An introduction to the study of human social and cultural life from an anthropological perspective. The course will explore the scope and nature of the discipline of anthropology through study of selected cases drawn from both technologically simple communities and complex modern industrial societies. Students with credit for SA 170 may not take SA 101 for further credit. Breadth-Social Sciences.

SA 141-3 Sociology and Anthropology Practicum I
This is the first semester of work experience in the Co-operative Education Program in sociology and anthropology. It is meant to be exploratory in nature. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 29 semester credit hours with a minimum cumulative GPA of 2.75 including SA 101 or 150 and SA 255. Students must have completed at least 45 semester credit hours with a minimum cumulative GPA of 2.75. Students should apply to the Faculty of Arts co-op coordinator by the end of the third week of the semester preceding the employment semester.

SA 150-4 Introduction to Sociology (S)
The study of basic concepts of sociology, such as social order, social change, social conflict and social inequality. Breadth-Social Sciences.

SA 201W-4 Anthropology of Contemporary Life (A)
An introduction to the anthropological perspective as applied to contemporary social and cultural issues and settings. Topics may include: urban anthropology; work and leisure; belief systems; medical anthropology; and problems of policy relevant research. Students with credit for SA 291 may not take SA 201 for further credit. Recommended: SA 101: Writing.

SA 203-4 Violence in War and Peace (SA)
A critical examination of the relationship between violence and structural inequalities. Focus will be on different forms that violence assumes in war and peace and how acts of violence are remembered, collectively denied or misrecognized. Particular cases studies may include colonization of indigenous people, Holocaust, South African Apartheid, India’s Partition, the genocide in Rwanda, the Israeli-Palestinian conflict, 9/11 and its aftermath along with everyday suffering, including gender violence. As well, special attention will be given to anthropological witnessing. Prerequisite: SA 101 or SA 150.

SA 210-4 Introduction to Power and Regulation of Self and Others (S)
Surveys the field of social and moral regulation of human subjects in both historical and contemporary contexts. It canvases the wide range of ideas, policies and methods that have characterized state
and civil projects aimed at imposing social order through systems of law, politics, education, health, welfare, labour, religion, family, media, and other key social institutions. Students will learn about the profound impact of civil and state regulation projects in their many forms on societies past and present, and about the rich diversity of institutional, cultural and human experience that these social ordering ideologies, policies and practices encompass. Prerequisite: SA 101 or SA 150.

SA 218-4 Illness, Culture and Society (SA)
The study of socio-cultural factors related to health and illness. Focus will be on patterns of health seeking activity, systems of health care, causal and symbolic factors involved in physical and mental illness and the medicalization of life in contemporary society. The disciplinary focus of the course will vary from semester to semester. Prerequisite: SA 101 or 201 or 150. Students with credit SA 460 when offered in Medical Anthropology may not take SA 218 for further credit.

SA 231-4 Sociology of Families (S)
An examination of families and households in social, cultural, political and economic context. This course focuses on the diversity of family forms in contemporary societies (particularly Canada) in relation to various social institutions and processes, including demographic trends, ideology, gender inequality, the economy, the state and social policies. Prerequisite: SA 150.

SA 241-3 Sociology and Anthropology Practicum II
This is the second semester of work experience in the Co-operative Education Program in sociology and anthropology. Building on the experiences of the first employment semester, this semester will provide a work experience that integrates theory and practice of the social sciences. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of SA 141 and normally the completion of at least 45 semester credit hours with a minimum cumulative GPA of 2.75. Students should apply to the Faculty of Arts co-op coordinator by the end of the third week of the semester preceding the employment semester.

SA 245-4 Cultures and Images (A)
This course introduces students to the principles and practices of visual anthropology through exploring the creation, circulation, and consumption of images among and between members of diverse cultures in the contemporary world. Topics to be covered include the use of photographs, film and video as a tool in ethnographic research; the use and implications of new information technologies; the ‘reading’ of photographs, film and video from an anthropological perspective; the emergence and development of non-Western visual media. Prerequisite: SA 101.

SA 250-4 Introduction to Sociological Theory (S)
An account of sociological theory, outlining the main ideas and concepts of the principal schools of thought. Prerequisite: SA 150.

SA 255-4 Introduction to Social Research (SA)
An introduction to the conduct of sociological and anthropological research. Topics covered include: the relationship between theory and research, concept formation, operationalization, exploratory studies, hypothesis generation and testing, data collection techniques within both sociology and anthropology, the assessment of causality, the critical evaluation of research on both theoretical and methodological grounds, the definition of research problems and ethical issues in social research. Prerequisite: SA 101 or 150. Students with credit for POL 201 and 213 may not take SA 255 for further credit. Quantitative.
SA 260-4 Individual and Society (S)  
An examination of how self and identity (e.g. race, class, gender, sexual orientation) are socially derived within contemporary western culture, and of the ways that individuals shape their social environment. Prerequisite: SA 150.

SA 275-4 Asian Societies (S/A)  
An introduction to the societies of a selected region of Asia. The course will regularly be offered with a focus on Southeast Asia, but from time to time during other semesters will also be offered with a focus on East Asia or South Asia. Prerequisite: SA 101 or 150.

SA 286-4 Aboriginal Peoples and British Columbia: Introduction (A)  
Investigates contemporary social organization, cultural expression, and political representation among Aboriginal peoples in the province of British Columbia within an anthropological framework. Topics may include: land rights, law, gender relations, inter-cultural relations; policy studies in education, health, justice, social and economic development; indigenous knowledge; Aboriginal art, media and performance. Emphasis may differ from semester to semester. Students with credit for SA 140 may not take SA 286 for further credit. Recommended: SA 101.

SA 300-4 Canadian Social Structure (S/A)  
An analysis of the social institutions and structure of Canadian society. The focus of the course will vary from semester to semester, but typically it will examine different theoretical approaches to the study of Canada and, from these, develop a framework for the analysis of Canadian social institutions and class structure. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course. Recommended: SA 100.

SA 301-4 Contemporary Ethnography (A)  
A consideration of key themes in contemporary anthropology. This course addresses theoretical and methodological questions by examining the work of contemporary anthropologists conducting research in diverse locations around the world. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293. Students with credit for SA 370 may not take SA 301 for further credit.

SA 302W-4 Global Problems and the Culture of Capitalism (SA)  
An introduction to the political economy and culture of capitalism in relation to global problems. Case studies may focus on issues of population, famine, disease, poverty, construction, social inequality, and nation-state violence. Resistance, rebellion and social movements in response to these problems also will be addressed. Highly Recommended: SA 101 or SA 150. Students who took SA 294 in 03-1, 04-1 and 04-2 may take this course for further credit. Writing/Breadth-Social Sciences.

SA 304-4 Social Control (S)  
This course examines how the organization of control (formal and informal) affects both individuals and society. It will investigate how control takes form, how it functions, the ideologies supporting it, and the resistance it produces. We will ask the following questions: who are the agents of social control; who or what do they control; and how do they control? Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 315-4 New Information Technology and Society (SA)  
Explores the new social spaces and social practices fostered by new information technology. Special attention will be paid to who is making decisions about what technologies to adopt and how, what social changes are resulting, and who benefits and who loses. A significant portion of activity in this course will involve direct engagement with new information technology. Recommended: SA 150.

SA 316-4 Tourism and Social Policy (SA)  
An examination of tourism from the perspectives of sociology and anthropology, focusing primarily upon the social and cultural impacts of tourism and the social policy implications of tourism development in different societies. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 318-4 The Anthropology of Medicine (A)  
Explores the role of biomedicine in society and culture through historical and ideological organization of health and healing. Special attention will be paid to how biomedical categories structure experiences of the body; how means of life and death are shaped through medical interventions, and how social relations organize the delivery of biomedical technologies. Prerequisite: SA 101 or 150. Highly recommended: SA 201 and 218.

SA 319-4 Culture, Ethnicity and Aging (SA)  
An examination of the effects of culture and ethnicity on the aging process and the treatment of the aged. Although the orientation of the course is cross-cultural and comparative, particular emphasis will be placed on the social aspects of aging among various ethnic groups in contemporary Canada. Prerequisite: SA 101 or 150 and either one second year sociology (S) or sociology/anthropology (SA) course, or acceptance into the gerontology diploma program.

SA 321-4 Social Movements (S)  
A study of the sources, development and effects of social movements in transitional and modernized societies. Specific types of movements will be analysed. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 322-4 Sociology of Religion (S)  
An examination of the development and social impact of religious institutions in modern industrial societies. Consideration will be given to the classical theoretical approaches to the sociology of religion, and further topics which may be considered include: denominational religion in Britain and North America; the secularization thesis; the relationship between science and religion, and the organization, structure and social appeal of sectarian groups, and the relationship between the two. These perspectives include feminist, lesbian and gay, and queer and transgender challenges to traditional understandings of sex/gender identity, sexuality, and the relationship between the two. These perspectives will be given to gender, ethnicity, class and generation. Substantive examples of social policy issues will be selected from a number of fields. Prerequisite: SA 150 and either SA 101 or one other lower division (A) course.

SA 327-4 Sociology of Knowledge (S)  
An examination of sociological theories concerning the interaction of social structures, and meaning and belief systems. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course. Recommended: SA 250.

SA 331-4 Politics of the Family (S)  
A sociological examination of the contested nature of contemporary domestic and intimate relations. The course will focus on debates arising from equality movement politics (e.g., gender, sexuality, race). Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 332-4 The Anthropology of Childhood (A)  
A cross-cultural examination of the social and cultural relations that shape childhood in different settings. Topics to be considered could include: the social definition of childhood and child rearing; the institutional arrangements established for children and youth and the impact that these have on children, families, and society; the social construction of child and youth cultures. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293.

SA 333-4 Schooling and Society (S)  
A sociological analysis of the nature of the education system and its relationship to major social institutions in Western industrial societies, in particular Canada. Issues studied may include: the classroom, teachers, student culture, bureaucratization, inequality (e.g. gender), employment, and social policy. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 335-4 Gender Relations and Social Issues (S)  
A sociological study of the position of women and men in major social institutions in western industrial societies, in particular Canada. Social institutions that may be examined include: the family, education, the economy, the polity, law, and the mass media. Particular attention will be paid to social policy issues. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course. Students with credit for SA 292 (when offered as gender relations) or WS 303 may take this course. Recommended: WS 203.

SA 337-4 Sexuality and Society (SA)  
The categories that organize our understandings of sex, gender and sexuality have powerful histories and roles in organizing social relations in western society. Social activists and academics contest the naturalness of these categories particularly that of the binary opposition between male and female, and related assumptions about sexuality and sexual orientation. This course encompasses a range of perspectives on sex/gender identity, sexuality, and the relationship between the two. These perspectives include feminist, lesbian and gay, and queer and transgender challenges to traditional understandings of sex/gender identity and sexuality. Prerequisite: SA 230 or equivalent. Recommended: SA 292 for instructor.

SA 340-4 Social Issues and Social Policy Analysis (SA)  
An examination of how sociological and anthropological theories and methods can be applied to the examination of social problems and issues which become the object of social policy. A central concern of the course is the question of how social issues are defined as problematic. Particular attention will be given to gender, ethnicity, class and generation. Substantive examples of social policy issues will be selected from a number of fields. Prerequisite: SA 150 and either SA 101 or one other lower division (A) course.
SA 341-3 Sociology and Anthropology Practicum III
This is the third semester of work experience in the Co-operative Education Program in sociology and anthropology. The student will be focused in a specialized area of the student’s choice. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of SA 241 and normally the completion of at least one semester of 300 level coursework with a minimum cumulative GPA of 2.75. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

SA 345-4 Race, Immigration and the Canadian State (SA)
An introduction to critical perspectives on the social construction of race, nation building and transnational migration, with an emphasis on state policies and the experiences of immigrants. The course will cover a review of colonialism and the construction of racialized labor market. Core topics may include: racialization of space, anti-racist feminist thought, immigration policy, settlement services, multiculturalism, citizenship, racial profiling, diasporas, and refugees. Comparative material will be used to complement the Canadian focus. Prerequisite: SA 101 or 150 and one 200 division SA course.

SA 350-4 Classical Sociological Thought (S)
An examination of aspects of the work of one or more of the nineteenth or early twentieth century sociological theorists. Prerequisite: SA 250.

SA 351-4 Classical Marxist Thought (S)
A detailed study of classical Marxist social thought. Prerequisite: SA 250.

SA 352-4 Games, Sports and Cultures (A)
An anthropological examination of games and sports in cross-cultural perspective. Particular attention will be given to the social construction of games and athletic activities as well as the cultural, political and aesthetic meanings attached to these topics. That may be examined include: the embodiment of culture in sporting activities; the impact of inter-cultural contact and globalization on games and sport; the shaping of gender, class and ethnic identities through sport involvement; appropriate methodologies for producing sport ethnographies. Prerequisite: one of SA 101 or 201, or consent of instructor.

SA 353-4 Sociology of Sport (S)
A sociological examination of sport focuses on the role of this important set of institutions and activities in shaping social relations and understandings about difference and identity. Sport has a long history of naturalizing racial and gender differences in such a way as to reinforce and reflect social inequality more broadly. Racial segregation in sport (at least in formal legal terms) is no longer considered acceptable in western societies or in the Olympic movement at the global level. But the power of sport in reinforcing and naturalizing racial inequality continues while the naturalness and inevitability of sex segregation in sport remains largely unchallenged. This course will explore the relationships between sport and social inequality, sport and nationalism, and sport and the economy. Prerequisite: SA 101 or 150. Students who took SA 216 or SA 315 (when offered as Sociology of Leisure) may not take SA 353 for further credit.

SA 355-4 Quantitative Methods (SA)
An examination of measurement issues within sociological and anthropological research, focusing on the technical and conceptual construction and interpretation of tables, and an examination of the uses and abuses of statistics. Through an introduction to ‘hands on’ use of the computer, this course emphasizes the applications, rather than the mathematics, of statistics. Prerequisite: STAT 203 or equivalent and SA 255 or POL 213. Students with credit for SA 355 may not take POL 315 for further credit. Quantitative.

SA 356W-4 Ethnography and Qualitative Methods (SA)
An examination of qualitative field methods, including participant observation, interviewing, archival research, cross-cultural research, life histories, network analysis, mapping, and ethical problems of fieldwork. Prerequisite: SA 250 and 101 or 201. Writing.

SA 357W-4 Survey Methods (SA)
Students will formulate a research problem suited to a quasi-experimental (survey) design, and perform all the research steps needed for its completion. Prerequisite: SA 255. Recommend: SA 355. Writing/Quantitative.

SA 358-4 The Philosophy of the Social Sciences (SA)
An analysis of the nature of explanation in the social sciences: ‘mind’ and action, positivist and interpretive modes of explanation, sociological and historical explanation, objectivity, forms of relativism, the concept of rationality. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course. Recommended: SA 250 and 255.

SA 360-4 Special Topics in Sociology and Anthropology (SA)
A seminar exploring a topic not regularly offered by the department. The disciplinary content and change to reflect specific topics: refer to each semester’s course outline. Prerequisite: SA 101 and 150, plus one second year sociology (S), anthropology (A) or sociology/anthropology (SA) course.

SA 362-4 Society and the Changing Global Division of Labor (S)
An examination of the social and political implications of the global economy. Topics to be considered include the influence of neo-liberal economics, the decline of the national welfare state, transnational political agencies and public policy, the internationalization of culture, the global labor market, the ‘world city’ hypothesis, ethnic resurgence and alternatives to these developments. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 363-4 Process of Development and Underdevelopment (SA)
An examination of sociological and anthropological theories of development and underdevelopment as applied to the Third World. The nature and consequences of world system linkages; colonialism and decolonization; patterns of social change in selected societies and regions. Prerequisite: SA 250 or 101 and one of SA 201, 263, 286 or 293. Recommended: SA 263.

SA 364-4 Urban Communities and Cultures (SA)
Anthropological explorations of the relationship between political, cultural, and social processes in contemporary societies. Topics may include: social organization and symbolic systems; the use of political rhetoric and symbolism; the mobilization of social, cultural and political constituencies; the articulation of political processes between local, national, and international levels. Prerequisite: minimum of 90 credit hours including SA 301, or consent of instructor. Recommended: SA 356.

SA 402-4 The Practice of Anthropology (A)
An examination of the ways in which anthropology and ethnography may be used to affect action in the world. Topics may include: advocacy anthropology; the development and practice of applied anthropology; the emergence of anthropology and ethnography and the arts. Prerequisite: minimum of 90 credit hours including SA 101 and one of SA 201, 263, 286 or 293, or consent of instructor. Recommended: at least two upper division courses in anthropology.

SA 404-4 Andean Society and Culture (LAS)
An interdisciplinary study of the history and culture of the Andean region from the Inka period to the
present. The first half of the course examines the Andean response to colonialism and the nation-state; the second half focuses on issues and problems that Andean peoples confront today. Students who have taken LAS 410 may not take this course for further credit.

SA 410-4 Advanced Topics in Power and the Regulation of Self and Others (S)

Offers specialized instruction on advanced topics pertaining to the social and moral regulation of human subjects in both historical and contemporary contexts. It explores the ideologies, policies and practices of regulation and governance in application to selected social contexts and subjects including, but not confined to, welfare, justice, medicine, the ‘psy’ sciences, immigration, labour, sexuality, pornography, racialization, gender and family. Students will acquire specialized knowledge about the profound impact of civil and state regulation projects on societies past and present, and about the rich diversity of institutional and quotidian experiences that these social ordering ideologies, policies and practices encompass. Prerequisite: Minimum of 90 credit hours including, either SA 101 or SA 150, and SA 210.

SA 414-4 Sociology of Art Forms (S)

This course will focus on one or all of the following: the social origins and functions of art, sociological theories of aesthetics, and contemporary issues in art, such as the fate of art in modern society, popular culture, mass media, ideology in art. Prerequisite: Minimum of 90 credit hours including SA 150 and one second year sociology (S) or sociology/anthropology (SA) course, or consent of instructor.

SA 417-4 Contemporary Issues in Medical Sociology

An examination of sociological approaches to the study of health and health care, emphasizing the connections between social theory and empirical data. Topics may include: the social determinants of health, health inequities, the structure and reform of health care systems, and the application of human rights frameworks to the study of health. Prerequisite: Minimum of 90 credit hours which must include SA 255. Students who have taken SA 360 Special Topics: Medical Sociology in 2006-3 may not take this course for further credit.

SA 418-4 International Health: Global Policies and Local Realities (SA)

An investigation of the social, cultural, and political issues that contribute to problems of ill-health in resource-poor countries and the major efforts in international affairs to address these problems. It explores the application of knowledge about social, and especially gender relations in international health, with particular attention to local perspectives and grassroots initiatives. Institutional frameworks intended to promote health development are examined in historical and contemporary perspective through case studies on topics such as: malaria, population control, maternal health, HIV/AIDS, and tuberculosis. Prerequisite: 90 credit hours, which must include SA 101 or 150. Highly recommended: SA 218, 302 and 318. Breadth-Social Sciences.

SA 420-4 Sociology of Aging (SA)

The structural and behavioral implications of aging. Topics included will be: demographic aspects of aging; the relationship of aging to political, economic, familial and other social institutions; the psychological significance of aging. Prerequisite: Minimum of 90 credit hours including SA 150 and one second year sociology (S) or sociology/anthropology (SA) course, or acceptance into the diploma program in gerontology, or by consent of instructor. This course is identical to GER 420 and students cannot take both courses for credit.

SA 421-4 Commodities and Substances: Bodies, Consumption and Ingestion (A)

Addresses current theoretical and methodological approaches to the anthropological study of consumption, ingestion and related substances. Topics include historical perspectives on production, distribution and consumption; power and meaning; inequality and governance of legal and illegal drugs, drug foods, medicines and diverse populations of consumers and users. Prerequisite: Minimum of 90 credit hours including SA 101 or 150, and SA 301, or graduate student status in Faculty of Arts and Social Sciences or Faculty of Health Sciences. Students who have taken SA 460 in 04-1 or 05-1 may not take this course for further credit.

SA 429-4 Sex, Work, and International Capital (SA)

Through a program of focused readings, films, and case studies, this course examines the experiences of women in the Third World in relation to the global economy and reorganization of states and cultures. The course challenges conventional ways of thinking about everyday life in households and workplaces, and emphasizes that issues which may seem specifically third World-based are shared by many around the world. An awareness of this commonality helps us assess the balance of structural constraints and opportunities, and stimulates a discussion on the organization of alternative ways of living. Prerequisite: 90 credit hours which must include SA 150. Students who took SA 463 in 2003-1, SA 460 in 2003-3, and SA 360 in 2004-3 may not take this course for further credit.

SA 430-4 States, Cultures and Global Transitions (SA)

Through a program of focused readings, case studies, and films, the course offers a new perspective on the study of globalization. It balances classical themes with contemporary approaches to global processes of economic, political, and cultural transformation. The course tackles such topics as the material aspects of cooperation and coercion, class relations in structures of capital accumulation and global governance, and cultural dynamics. Alternatives to Euro-American centricism are explored through the examples of citizenship, cultural politics, ethnic and religious conflicts, human rights, indigenous rights, and women’s rights. Prerequisite: 90 credit hours which must include SA 150. Highly recommended: SA 302. Students who took SA 463 in 2004-3 may not take this course for further credit.

SA 441-3 Sociology and Anthropology Practicum IV

This is the last semester of work experience in the Co-operative Education Program in sociology and anthropology. The work experience will require a high level of expertise in both theoretical conceptions and practical endeavors. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: successful completion of SA 341 and normally the completion of at least 77 semester credit hours with a minimum cumulative GPA of 2.75. Students should apply to the Faculty of Arts co-op co-ordinator by the end of the third week of the semester preceding the employment semester.

SA 447-4 Anthropology and the Past (A)

An advanced seminar devoted to special topics in anthropological study of selected Third World societies. Topics will change from semester to semester, but may include liberation movements and colonialism, the comparative study of post-colonial societies; the persistence, transformation and disappearance of contemporary pleasantries; directed change programs. Prerequisite: minimum of 90 credit hours including SA 250 or 101 and one of SA 201, 286 or 293, or consent of instructor. Recommended: SA 363.

SA 472-4 Anthropology and the Past (A)

Anthropologists frequently turn to historical documents (traveler’s reports, missionary archives, etc.) in order to reconstruct the nature of past societies; likewise, every society has a sense of its own past and represents it in its own way. This course examines the relation between history and anthropology. Content may include: the use of historical material in anthropological research; construction of traditional knowledge as a cultural process; history and the politics of culture; the relation between individual and collective memory. Prerequisite: minimum of 90 credit hours including SA 301 or 350, or consent of the instructor.

SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar (A)

An opportunity for senior undergraduates to participate in a seminar concentrating on particular subjects of interest in the fields of social and cultural research among Aboriginal peoples in British Columbia. The course will focus on special topics that will differ from semester to semester. This may include: historical ethnography; policy issues and debates; economic development; ethnic and religious conflicts; human rights; indigenous rights; gender and generational relations; health and healing; ethnohistoric film; arts, literature and popular culture; cultural performance; oral tradition; exhibition and representation; cultural property. Prerequisite: minimum of 90 credit hours including SA 101 and one of SA 201, 263, 286 or 293, or consent of the instructor. Recommended: SA 286.

SA 496-4 Directed Readings in Anthropology (A)

Directed readings in a selected field of study under the direction of a single faculty member. A paper will be required. Prerequisite: minimum of 90 credit hours including SA 101 and one of SA 201, 263, 286 or 293,
or consent of the instructor. Students with credit for SA 497 may not take SA 496 for further credit.

SA 497-4 Directed Readings in Sociology (S) Directed readings in a selected field of study under the direction of a single faculty member. A paper will be required. Prerequisite: minimum of 90 credit hours including SA 150 and one second year sociology (SA) or sociology/anthropology (SA) course, or consent of instructor. Students with credit for SA 496 may not take SA 497 for further credit.

SA 498-8 Field Study in Sociology and/or Anthropology (SA) Advanced field project in a research setting. Admission dependent on availability of appropriate field placements and departmental supervisory capacity. Prerequisite: completion of all major course requirements with the exception of SA 301 for anthropology majors and SA 350 for sociology majors, which may be taken concurrently.

SA 499-8 Honors Essay (SA) An honors essay to be written under the direction of a member of faculty, a copy of which is to be permanently lodged with the department. On completion, the essay is to be defended orally in a departmental seminar.

SA 840-1 Graduate Seminar I Orientation to university, professional development, and cohort building. Required course for the first year MA and PhD students in Sociology and Anthropology.

SA 841-1 Graduate Seminar II Presentation by faculty members, senior graduate students, and guest speakers. Required course for first year MA and PhD students in Sociology and Anthropology.

SA 849-5 Selected Topics in the History of Sociological Thought Examines the classical tradition of sociological thought, represented in the writings of a range of early leading theorists such as Karl Marx, Max Weber, Emile Durkheim, Georg Simmel and/or George Herbert Mead. Will also include a review of the writings and influence of thinkers such as Montesquieu, Rousseau, Descartes, Spinoza, Bacon, Hobbes, and/or Locke. Required course for MA and PhD students in Sociology. Students from other departments and faculties may enrol with permission of instructor. Offered each fall semester.

SA 850-5 Selected Topics in Contemporary Social Theory Examines at least two perspectives from the body of social theory that has developed since World War II. Perspectives to be discussed may include but are not limited to: symbolic interactionism, feminism, structuralism, post-structuralism, post-marxism, post-modernism, post-colonialism, queer theory and neo-functionalism. Required course for MA and PhD students in Sociology. Students from other departments and faculties may enrol with permission of instructor. Offered each spring semester. Prerequisite: SA 849 or permission of instructor.

SA 853-5 Readings in Sociology I SA 854-5 Readings in Sociology II SA 855-5 Advanced Quantitative Methods in Sociology Examines the use of quantitative methods and statistical analysis in social research. Students will develop the knowledge base and skills necessary to understand and critically evaluate contemporary sociological literature that utilizes advanced quantitative methods. Lab sessions offer students the opportunity to apply a variety of statistical techniques. Prerequisite: An upper division undergraduate course in quantitative methods which covers statistical analysis (including probability and significance, hypothesis testing, and univariate and bivariate techniques), or permission of the instructor.

SA 856-5 Qualitative Methodology Examines contemporary approaches to qualitative methodology in Sociology and Anthropology including epistemological and ethical debates surrounding the practice of qualitative methodology in diverse contexts. Students will investigate qualitative research methods applicable to their graduate research projects. Required course for MA and PhD students in Sociology and Anthropology. Students from other departments and faculties may enrol with permission of instructor. Offered each spring semester.

SA 857-5 Research Design Seminar Guides students through the process of designing a prospectus for MA or PhD thesis research. Required course for MA and PhD students in Sociology and Anthropology. Students from other departments and faculties may enrol with permission of instructor. Offered each summer semester. Prerequisite: SA 856 or permission of instructor.

SA 870-5 Contemporary Theory in Anthropology Examines the dynamic relationship among conceptual aims, social relations in research, and the socio-political contexts of anthropological work through close study of selected works in anthropology since 1970. Required course for MA and PhD students in Anthropology. Students from other departments and faculties may enrol with permission of instructor. Offered each fall semester.

SA 871-5 Readings in Anthropology I SA 872-5 Readings in Anthropology II SA 874-5 Historical Perspectives on Anthropological Theory Examines anthropological history. Historical context. An examination of the political, cultural, and intellectual factors that shaped disciplinary discourse of a particular period, and continue to affect present practice. Emphasis may be on particular theorists, and/or particular theories and/or persistent guiding themes. The goal is to think about anthropology anthropologically, thus complementing the more contemporary focus of SA 870. Prerequisite: SA 870, or equivalent, or permission of instructor.

SA 875-5 Ethnographic Methodology: Social/Cultural Anthropology In depth study of ethnographic methodology as practiced, theorized and debated by social and cultural anthropologists. Course will include anthropological analyses of multi- and interdisciplin ary approaches to, and adaptations of, ethnographic methodology and methods. Elective course for MA and PhD students in Sociology and Anthropology. Students from other departments and faculties may enrol with permission of instructor. Course will be offered in response to student demand, dependent on availability of departmental resources.

SA 886-5 Selected Problems in Social Analysis SA 890-0 Practicum I Prerequisite: A completion of core MA degree requirements SA 850 or 870, and SA 857 plus one (thesis option) or two (extended essay or research project option) of the following: SA 863, 854, 871, 872 and 886 (or equivalent) with a minimum GPA of 3.0. The recommendation of the student’s supervisory committee and the approval of the departmental graduate program committee also is required.

SA 891-0 Practicum II Prerequisite: SA 890.

SA 892-0 Practicum III Prerequisite: SA 891 and departmental approval.

SA 896-6 MA Thesis Research Operationalizes thesis prospectus completed in SA 857. Prerequisite: All required and elective courses for MA degree except SA 898.

SA 897-6 PhD Qualifying Examinations Course objective is to provide a framework and process for students and supervisors to work within to facilitate students’ satisfactory preparation for qualifying examinations, and to complete qualifying examinations required for admission to doctoral candidate standing. Prerequisite: All PhD course requirements, with the exception of SA 857 must be completed before student may enrol in SA 897.


Spanish SPAN Faculty of Arts and Social Sciences Department of Linguistics Language Training Institute

SPAN 102-3 Introductory Spanish I First half of first year Spanish. Emphasis on developing conversation and comprehension skills as well as understanding how Spanish grammar works. Students will learn typical daily vocabulary and are introduced to cultural aspects of the language. By the end of the semester, students will have acquired basic conversational skills and an elementary reading facility.

SPAN 103-3 Introductory Spanish II Second half of first year Spanish. As in SPAN 102, the emphasis is on oral skills and grammar while continuing to develop reading and writing proficiency. By the end of the semester, students will be able to communicate in Spanish using a wide range of grammatical structures and vocabulary. SPAN 103 should be taken in the semester immediately following SPAN 102. Prerequisite: SPAN 102, grade 12 Spanish, or equivalent.

SPAN 201-3 Intermediate Spanish I First half of second year Spanish. Students will transfer their knowledge of the structure of Spanish into performance and use the language in an accurate and idiomatic way. The emphasis is on further development of all four skills: listening, speaking, reading, and writing. By the end of SPAN 201, students will be able to function in a Spanish-speaking environment. Prerequisite: SPAN 103 or equivalent.

SPAN 202-3 Intermediate Spanish II Continues the work of SPAN 201 with emphasis on oral command and writing skills. Reading of selected texts will be introduced to expose the students to Hispanic culture. Prerequisite: SPAN 201.

SPAN 204-3 Spanish Vocabulary Builds students’ receptive and productive vocabulary to prepare them for intensive work in upper level Spanish courses. Prerequisite: SPAN 201 or equivalent.

SPAN 301-3 Advanced Spanish Grammar and Writing Detailed examination of contemporary Spanish grammar. Appropriate grammatical usage is reinforced by exercises and writing assignments. Both advanced learners and native speakers will benefit through intensive work on a wide range of grammatical phenomena. Prerequisite: SPAN 202.

SPAN 302-3 Spanish Conversation Through Cinema Enhances students’ conversational skills through activities centered on Spanish language films. A selection of films from different parts of the Hispanic world will expose students not only to dialectal and register differences, but also to cultural practices in a variety of settings. Prerequisite: SPAN 202 or equivalent.

Simon Fraser University 2007 - 2008 Calendar
Special Arrangements SAR

Dean of Graduate Studies

SAR 891-892-3 Special Topics
To be selected by the student and supervisory committee.

SAR 893-4 Special Topics
To be selected by the student and supervisory committee.

SAR 894-5 Special Topics
To be selected by the student and supervisory committee.

SAR 895-3 Special Topics
To be selected by the student and the supervisory committee.

SAR 896-6 Special Topics
To be selected by the student and the supervisory committee.

SAR 897-898-3 Special Topics
To be selected by the student and the supervisory committee.

SAR 899-6 Master’s Thesis
SAR 899-7 PhD Thesis

Statistics STAT

Faculty of Science

STAT 100-3 Chance and Data Analysis
An introduction to chance phenomena and data analysis through simulation and examination of real world contexts including sports, investment, lotteries and environmental issues. Students can choose which of STAT 100 and STAT 101 they take as their first STAT course. However, to receive credit for both STAT 100 and STAT 101, STAT 100 must be taken first. Recommended: this course should not be taken for credit for both STAT 100 and STAT 101. STAT 100 must be taken first. Students with credit for ARCH 376, BUEC 232 (formerly 332) or STAT 270 (formerly MATH 272 and 371) may not subsequently receive credit for STAT 101-3. Students with credit for STAT 201, 203, 301 may not receive credit for STAT 101-3. Students with credit for STAT 101, 103, 301, 303, 304, 305 may not take STAT 101 for further credit. Intended to be particularly accessible to students who are not specializing in Statistics. In addition to regularly scheduled lectures, students registered in STAT 100, 101, 201, 203, 270, and 302 are encouraged to come to the workshops for assistance any time during posted working hours. At the workshop students will have the opportunity to meet with the co-ordinator, the teaching assistants and other students, and work together to understand statistics in a friendly and helpful environment. K9516 Shrum Science Centre (inside K9510) Quantitative.

STAT 101-3 Introduction to Statistics
An introductory course in the collection, description, analysis and summary of data, including the concepts of frequency distribution, parameter estimation and hypothesis testing for both STAT 100 and STAT 101. STAT 100 must be taken first. Students with credit for ARCH 376, BUEC 232 (formerly 332) or STAT 270 (formerly MATH 272 and 371) may not subsequently receive credit for STAT 101-3. Students with credit for STAT 201, 203, 301 may not take STAT 101 for further credit. Intended to be particularly accessible to students who are not specializing in Statistics. In addition to regularly scheduled lectures, students registered in STAT 100, 101, 201, 203, 270, and 302 are encouraged to come to the workshops for assistance any time during posted working hours. At the workshop students will have the opportunity to meet with the co-ordinator, the teaching assistants and other students, and work together to understand statistics in a friendly and helpful environment. K9516 Shrum Science Centre (inside K9510) Quantitative.

STAT 201-3 Statistics for the Life Sciences
An introductory course in research methodology and associated statistical analysis techniques for students training in the life sciences. Prerequisite: 30 credit hours. Students with credit for STAT 101, 102, 203 (formerly 103), 270 (formerly MATH 272 or 301) may not take STAT 201 for further credit. Intended to be particularly accessible to students who are not specializing in Statistics. In addition to regularly scheduled lectures, students registered in STAT 100, 101, 201, 203, 270, and 302 are encouraged to come to the workshops for assistance any time during posted working hours. At the workshop students will have the opportunity to meet with the co-ordinator, the teaching assistants and other students, and work together to understand statistics in a friendly and helpful environment. K9516 Shrum Science Centre (inside K9510) Quantitative.

STAT 203-3 Introduction to Statistics for the Social Sciences
Introduction to descriptive and inferential statistics aimed at students in the social sciences. Scales of measurement. Descriptive statistics. Measures of association. Hypothesis tests and confidence intervals. Students in Sociology and Anthropology are expected to take SA 255 before this course. Students with credit for STAT 101, 102, 103, 201, 270, ARCH 376 or BUEC 232 (formerly 332), may not subsequently receive credit for this course. Recommended: a research methods course such as SA 255, CRIM 120, POL 213 or equivalent is recommended prior to taking STAT 203. Intended to be particularly accessible to students who are not specializing in Statistics. In addition to regularly scheduled lectures, students registered in STAT 100, 101, 201, 203, 270, and 302 are encouraged to come to the workshops for assistance any time during posted working hours. At the workshop students will have the opportunity to meet with the co-ordinator, the teaching assistants and other students, and work together to understand statistics in a friendly and helpful environment. K9516 Shrum Science Centre (inside K9510) Quantitative.

STAT 270-3 Introduction to Probability and Statistics
Basic laws of probability, sample distributions. Introduction to statistical inference and applications. Corequisite: MATH 152 or 155 or 158. Students wishing an intuitive appreciation of a broad range of statistical strategies may wish to take STAT 101 first. Quantitative.

STAT 285-3 Intermediate Probability and Statistics
This course is a continuation of STAT 270. Review of probability models. Procedures for statistical inference from survey results and experimental data. Statistical model building. Elementary design of experiments and regression methods. Introduction to lifetime analysis. Introduction to time series. Introduction to stochastic processes. Prerequisite: STAT 270. Prerequisite or corequisite: MATH 232. This course may not be taken for credit by students who have credit for STAT 330 prior to the fall 03-3 semester. Quantitative.

STAT 290-3 Selected Topics in Probability and Statistics
Topics in areas of probability and statistics not covered in the regular undergraduate curriculum of the department. Prerequisite: dependent on the topic covered.

STAT 300-3 Statistics Communication
Guided experiences in written and oral communication of statistical ideas and results with both scientific and lay audiences. Prerequisite: Admission to the major or honors programs in statistics or actuarial science at SFU.

STAT 300W-3 Statistics Communication
Guided experiences in written and oral communication of statistical ideas and results with both scientific and lay audiences. Prerequisite: Admission to the major or honors programs in statistics or actuarial science at SFU. Writing.

STAT 302-3 Analysis of Experimental and Observational Data
The standard techniques of multiple regression analysis, analysis of variance, and analysis of covariance, and their role in experimental research. Prerequisite: any STAT course, or BUEC 232, or ARCH 376. Students cannot obtain credit for STAT 302 if they already have credit for STAT 350, or if they are simultaneously registered in STAT 302 and STAT 350. Stat major and honors students may not use this course to satisfy the required number of elective hours of upper division statistics. However, they may include the course to satisfy the total number of required hours of upper division credit. In addition to regularly scheduled lectures, students registered in STAT 100, 101, 201, 203, 270, and 302 are encouraged to come to the workshops for assistance any time during posted working hours. At the workshop students will have the opportunity to meet with the co-ordinator, the teaching assistants and other students, and work together to understand statistics in a friendly and helpful environment. K9516 Shrum Science Centre (inside K9510) Mr. R. Insley. Quantitative.

STAT 330-3 Introduction to Mathematical Statistics

STAT 336-3 Job Practicum I
This is the first semester of work experience in a co-operative education program available to statistics students. Interested students should contact their departmental advisors as early in their career as possible for proper counselling. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: students must apply and receive permission from the co-op co-ordinator at least one but preferably two semesters in advance. They will normally be required to have completed 45 hours of credit with a GPA of 2.5 before they may take...
this practicum course. The course will be graded on a pass/withdraw basis. A course fee is required.

STAT 337-3 Job Practicum II
This is the second semester of work experience in a co-operative education program available to statistics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: STAT 336 or Job Practicum I from another department. Students must apply and receive permission from the co-op co-ordinator at least one semester in advance. The course will be graded on a pass/withdraw basis. A course fee is required.

STAT 350-3 Linear Models in Applied Statistics

STAT 380-3 Introduction to Stochastic Processes

STAT 390-3 Selected Topics in Probability and Statistics
Topics in areas of probability and statistics not covered in the regular undergraduate curriculum of the department. Prerequisite: dependent on the topic covered.

STAT 400-3 Data Analysis
A problem-based course emphasizing the exploratory aspects of statistical analysis with emphasis on modern computer-oriented methods. Prerequisite: STAT 350. Quantitative.

STAT 402-3 Generalized Linear and Nonlinear Modelling
A skills oriented unified approach to a broad array of non-linear regression modelling methods including classical regression, logistic regression, probit analysis, dilution assay, frequency count analysis, ordinal-type responses, and survival data. Prerequisite: STAT 350. Quantitative.

STAT 403-3 Intermediate Sampling and Experimental Design
A practical introduction to useful sampling techniques and intermediate level experimental designs. Prerequisite: STAT 302 or 350. Students with credit for STAT 410 or 430 may not take STAT 403 for further credit. Statistics minor, major and honors students may not use this course to satisfy the required number of elective hours of upper division Statistics. However, they may include the course to satisfy the total number of required hours of upper division credit. Intended to be particularly accessible to students who are not specializing in Statistics. Quantitative.

STAT 410-3 Statistical Analysis of Sample Surveys
An introduction to the major sample survey designs and their mathematical justification. Associated statistical analyses. Prerequisite: STAT 350. Quantitative.

STAT 430-3 Statistical Design and Analysis of Experiments
An extension of the designs discussed in STAT 350 to include more complex and model based designs, fractional factorial designs, and response surface methods. Prerequisite: STAT 350 (or MATH 372). Quantitative.

STAT 436-3 Job Practicum III
This is the third semester of work experience in a co-operative education program available to statistics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: STAT 337 or Job Practicum II from another department. Students must apply and receive permission from the co-op co-ordinator at least one semester in advance. The course will be graded on a pass/withdraw basis. A course fee is required.

STAT 437-3 Job Practicum IV
This is the fourth semester of work experience in a co-operative education program available to statistics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: STAT 436 or Job Practicum III from another department. Students must apply and receive permission from the co-op co-ordinator at least one semester in advance. The course will be graded on a pass/withdraw basis. A course fee is required.

STAT 438-3 Job Practicum V
This is an optional fifth semester of work experience in a co-operative education program available to statistics students. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: STAT 437 or Job Practicum IV from another department. Students must apply and receive permission from the co-op co-ordinator at least one semester in advance. The course will be graded on a pass/withdraw basis. A course fee is required.

STAT 450-3 Statistical Theory
Distribution theory, methods for constructing tests, estimators, and confidence intervals with special attention to likelihood methods. Properties of the procedures including large sample theory. Prerequisite: STAT 330. Quantitative.

STAT 460-3 Bayesian Statistics
The Bayesian approach to statistics is an alternative and increasingly popular way of quantifying uncertainty in the presence of data. This course covers the principal elements of the Bayesian paradigm, including Bayesian estimation, testing, prediction and decisions, and hierarchical models. Prerequisite: STAT 330 and 350. Quantitative.

STAT 490-3 Selected Topics in Probability and Statistics
Topics in areas of probability and statistics not covered in the regular undergraduate curriculum of the department. Prerequisite: dependent on the topic covered.

STAT 495-3 Directed Studies in Probability and Statistics
Independent reading or research on consultation with the supervising instructor. Prerequisite: written permission of the department undergraduate studies committee.

STAT 602-3 Generalized Linear and Nonlinear Modelling
A methods oriented unified approach to a broad array of nonlinear regression modelling methods including classical regression, logistic regression, probit analysis, dilution assay, frequency count analysis, ordinal-type responses, and survival data. A project will be assigned related to the student’s field of study. Prerequisite: STAT 302 or 350 or permission of instructor. Open only to graduate students in departments other than Statistics and Actuarial Science.

STAT 650-5 Quantitative Analysis in Resource Management and Field Biology
The use of statistical techniques and mathematical models in resource management with special emphasis on experimentation, survey techniques, and statistical model construction. Prerequisite: A course in parametric and non-parametric statistics. This course may not be used for the satisfaction of degree requirements in the Department of Statistics and Actuarial Science.

STAT 801-4 Statistics

STAT 802-4 Multivariate Analysis
An advanced course in multivariate analysis. Factor analysis, discriminant analysis, principal components, canonical correlations. Multivariate regression and analysis of variance.

STAT 804-4 Time Series Analysis
An introduction to time series models and their analysis. Both time-domain and frequency-domain techniques will be studied. Prerequisite: STAT 450 or equivalent or permission of the instructor.

STAT 805-4 Non-Parametric Statistics and Discrete Data Analysis
Order statistics, rank statistics, procedures based on the empirical distribution function. Asymptotic efficiencies, goodness-of-fit, contingency tables, log-linear models and further topics will be offered. Prerequisite: STAT 330 or equivalent or permission of the instructor.

STAT 806-4 Lifetime Data Analysis

STAT 811-2 Statistical Consulting I
This course is designed to give students some practical experience as a statistical consultant through classroom discussion of issues in consulting and participation in the department’s Statistical Consulting Service under the direction of faculty members or the director.

STAT 812-2 Statistical Consulting II
Students will participate in the department's Statistical Consulting Service under the direction of faculty members or the director.

STAT 870-4 Applied Probability Models

STAT 880-0 Practicum I
First semester of work experience in the Co-operative Education Program.

STAT 881-0 Practicum II
Second semester of work experience in the Co-operative Education Program.

STAT 882-0 Practicum III
Third semester of work experience in the Co-operative Education Program.

STAT 883-0 Practicum IV
Fourth semester of work experience in the Co-operative Education Program.

STAT 890-4 Statistics: Selected Topics
STAT 891-2 Seminar
A course to be taught by current and visiting faculty and with topics chosen to match the interests of the students.

STAT 894-2 Reading
STAT 895-4 Reading
STAT 898-6 MSc Thesis/Project
STAT 899-6 PhD Thesis/Project
Sustainable Community Development SCD
Faculty of Arts and Social Sciences

SCD 201-3 Introduction to Sustainable Community Development
First required course for the SCD Certificate. Builds an understanding of strengths and weaknesses of conventional approaches to development; rationale for alternative approaches; varying interpretations of community and economic development; and essential components for creating local economic development strategies. Sustainable Community Development is introduced as a framework to meet current social and economic needs while ensuring adequate resources are available for future generations. Prerequisite: 30 credit hours, SCD Certificate program approval or permission of the Director for SCD. Not permitted for credit toward the SCD Post Baccalaureate Diploma. Students who have taken CED or SCD 201 for credit may not take this course for further credit. Corequisite: students may not take this course concurrently with upper division SCD courses.

SCD 301-4 Sustainable Community Development Theory and Practice
A theoretical foundation for understanding sustainable development at the community level: including an orientation to environmental, economic, and social aspects of development. Emphasizes economic and policy instruments, and planning tools, for engaging in and implementing SCD. Prerequisite: SCD Certificate program approval and CED or SCD 201 or SCD diploma program approval or completion of 60 credit hours or permission of the Director for SCD. Students who have taken CED or SCD 301 for credit may not take this course for further credit.

SCD 401-4 Social Enterprise for Sustainable Community Development
Third required course for the SCD Certificate. Introduction to the theory and practice of social enterprise within a SCD context, including the appropriate form of social enterprise for a particular purpose. Prerequisite: CED or SCD 301, or permission of the Director for SCD. Students who have taken CED or SCD 401 for credit may not take this course for further credit.

SCD 403-4 Leadership in Sustainable Community Development
Fourth required course for the SCD Certificate. Concerned with approaches SCD leaders require as agents of change, including: tackling complex community issues in addition to offering innovative tools for engaging others in meaningful collaboration processes. Prerequisite: CED or SCD 301, or permission of the Director for SCD. Students who have taken CED or SCD 403 for credit may not take this course for further credit.

SCD 404-4 Project in Sustainable Community Development
Provides students an opportunity to apply ideas and models acquired in the program to a practical problem in sustainable community development. Required for SCD PBD students. Certificate students must apply for special permission to take this course. Enrollment is limited. Prerequisite: CED or SCD 301, 401, 403 and permission of the Director for SCD. Students who have taken CED or SCD 404 for credit may not take this course for further credit.

SCD 410-4 Special Topics in Sustainable Community Development
A specific topic within the field of sustainable community development, not covered by regularly scheduled, required courses in the program. Prerequisite: CED or SCD 301 or permission of the Director for SCD. Students who have taken CED or SCD 410 with the same topic for credit may not take this course for further credit.

SCD 412-4 Directed Studies in Sustainable Community Development
Designed to permit students to expand their knowledge base and apply their critical thinking in SCD. Open to all SCD PBD students. Certificate students must apply for special permission to take this course. Enrollment is limited. Prerequisite: CED or SCD 301, 401, and 403, and permission of the Director for SCD. Students who have taken CED or SCD 412 for credit may not take this course for further credit.

TechOne TECH Faculty of Applied Sciences

TECH 100-3 Fundamentals of Teamwork and Communication
I
Foundational skills in effective communication, team dynamics and information research are introduced and developed as needed in both virtual and face-to-face environments.

TECH 101-3 Communication, Teamwork and Collaborative Process
Teaches essential skills for negotiating first-year course work successfully. Covers the principles, practice and understanding of effective communication, research, critical thinking and teamwork needed within both face-to-face and virtual environments. Presents opportunities to practice and develop communication and interpersonal skills, and make that expertise transferable from the classroom to the workplace.

TECH 101W-3 Communication, Teamwork and Collaborative Process
Teaches essential skills for negotiating first-year course work successfully. Covers the principles, practice and understanding of effective communication, research, critical thinking and teamwork needed within both face-to-face and virtual environments. Presents opportunities to practice and develop communication and interpersonal skills, and make that expertise transferable from the classroom to the workplace. Writing.

TECH 106-3 Spatial Thinking and Communicating
Introduction to the world of 3D thinking, representation and communication, with a focus on spatial thinking. Provides the foundational skills and knowledge needed to understand, create, and use computer-generated 3D representations. Covers the technical bases of representing 3D environments, as well as cognitive science theories of visual thinking.

TECH 114-3 Technology in Everyday Contexts
Introduces the role of technologies in an increasingly complex world. Explores the nature and evolution of technology. Provides firsthand experience with a variety of computer, communication and engineering technologies and assesses the impact and consequences of technology on both the individual and societal levels. Themes examined in this course focus on the use of technologies in situated applications and everyday contexts, giving students experience in relating the achievements of technology to human needs.

TECH 124-3 Design Thinking
Investigates the role that design and the designer play in the world around us, and explores how design facilitates our understanding of our environment and facilitates communication with others. Examines the importance of precedent in design and how examples, models, patterns or standards reflect learning and critical thinking. Throughout the course students will, individually and in teams, use design questioning processes as tools to develop their critical thinking skills and to explore the role that design plays in their lives and the daily functioning of their communities.

Urban Studies URB
Faculty of Arts and Social Sciences

URB 610-4 Urban Design: Integrating Theory and Practice
This course is an examination of urban design as a discipline that involves the environmental, aesthetic, social, economic, geographic, ecological, historical, political, and cultural aspects of the built environment. The importance of creative design, the interrelationship between the spatial organization of a city, its efficient delivery of services, the social, cultural and economic considerations of the public realm, as well as the process of change in our pluralistic society will all be considered.

URB 620-4 Urban Communities and Cultures
This course is an introduction to the anthropological and sociological study of complex urban societies in comparative perspective. It includes study of anthropological and sociological approaches to urbanization, the nature of the city as a social system, and urban communities and cultures.

URB 630-4 Urban Development, Planning and Policy
The focus of this course is the evolving relationship between state interventions into the city, and dynamics of urban development. The class emphasizes the historical context to urban planning and policy, with particular reference to the Canadian city.

URB 640-4 Urban Regions and Urban Change
The aim of this course is to develop a perspective on the study of urbanization by applying systematic approaches to specific regional and case contexts. Major theoretical and conceptual themes will be reviewed. Some emphasis will be placed upon the Canadian experience in order to develop a common ground among members of the course and some emphasis will be also placed upon the United States and Western Europe because of the dominance of those collective urban experiences and literatures. However, members of the course will be expected to develop an interest in a particular region, assemble a personal bibliography and report to the class on their enquiries. The list of references given to the class may be perused for selected items to initiate this personal work. Emphasis will be placed upon individual and/or participatory research.

URB 645-4 Urban Sustainable Development
In this course, we begin to answer the question: what does the idea of sustainable development mean for cities? Using case studies from Vancouver and around the world, we will seek to understand how urban sustainable development innovations are developed, designed, and implemented. Special attention will be paid to the importance of sustainable development linkages between urban issues related to economic development, social justice, and environmental conservation and protection.

URB 650-4 Urban Governance
This course is intended to confront students with many of the current administrative, policy, inter-governmental and political challenges of local/urban/city-regional government in the 21st century. It will enable students to critically evaluate the varied nature and development of urban and metropolitan governance through an assessment of differing city-regional forms and responsibilities. The primary emphasis is on: social, economic and political sustainability; ethnic, gender and ecological
and political ideas are not context-free. The course
The city has long been a subject of, and site for,
reformulate social policy in urban contexts to address
emerging analyses of the role of ‘place’ in shaping
emphasize the systematic nature of health status

URB 660-4 Transportation and Urban Development
Explores the relationships between mobility, economic activity, and social interaction that influence urban development. Topics considered will include the spatial dynamics underlying travel behavior, the vehicle and infrastructure technology used in meeting mobility needs, and organizations that deliver transportation services and the public policies that govern an urban transportation system.

URB 665-4 Urban Housing Policy
Examination of the roles of housing in an urban society, the evolution of urban housing policy in Canada, the policies that shape the existing housing system, and proposals for modifying housing policies and programs. The role of affordable housing as an essential component of a sustainable community will be emphasized.

URB 670-4 Urban Research Methods
Offers a top-to-bottom approach to researching urban public policy problems, from imagining projects to gathering interpreting data and presenting findings to the public. The emphasis of this program is for students to be able to understand the work of others and design their own studies. In addition to this, students are trained in how to apply descriptive statistics such as means, measures of spread and cross-tabulation. Students wishing to deepen their quantitative skills, such as multivariate, qualitative or spatial analysis, will be encouraged to take advanced programs offered in affiliated departments.

URB 680-4 Managing Cities
Examines theories of public management in an urban context – how governments allocate resources, distribute income and regulate public enterprise – in both political and social contexts. Taking a ‘champion vs challenger’ approach the first segment of the course describes in detail the dominant theory in public management – new public management – and then contrasts this theory with others common to the discipline including traditional approaches, cultural theory, representative bureaucracy and new institutionalism. The theory is illustrated using examples from the municipalities within the Greater Vancouver Regional District and other Canadian and international cities.

URB 685-4 Health Status and Health Policy in Urban Canada
The focus of this course is the distribution of health status within urban centers in Canada, and related health policy developments. The course will emphasize the systematic nature of health status distribution, the historical pattern of health inequality, emerging analyses of the role of ‘place’ in shaping health patterns, housing and health, and attempts to reformulate social policy in urban contexts to address social determinants of health inequality in Canada.

URB 690-4 The City in Art, Culture and Politics
The city has long been a subject of, and site for, cultural reflection. This course recognizes that cultural and political ideas are not context-free. The course focuses on modern and postmodern thought and their relation to the evolving city.

URB 693-2 Directed Readings I
Supervised readings in an aspect of urban studies. Registration in URB 693 requires the prior approval of the Urban Studies Graduate Program Committee.

URB 694-4 Directed Readings II
Supervised readings in an aspect of urban studies. Registration in URB 694 requires the prior approval of the Urban Studies Graduate Program Committee.

URB 695-4 Selected Topics in Urban Studies
This course provides an opportunity for students to study one or more urban studies topics that lie beyond the scope of the other courses. This course will normally provide a more research-intensive experience than other graduate urban studies courses.

URB 696-4 Seminar in Urban Studies
In-depth study of two or three areas of urban studies with particular attention to (1) the contributions of various disciplines and (2) the development of a proposal for research to explore a suitable area of particular interest to the student. Where feasible, students will be involved with external organizations in developing their research proposal.

URB 697-4 Research Project
A research project on some aspect of urban studies supervised by a faculty member with the participation of a supervisory committee. Prerequisites: URB 696.

URB 699-2 Research Project Completion
Completion of a research project on some aspect of urban studies supervised by a faculty member with the participation of a supervisory committee. This course is intended for students who do not complete URB 697 within one month of the end of the semester in which they are registered in it. Prerequisite: URB 697.

Women's Studies WS
Faculty of Arts and Social Sciences

WS 101-3 Introduction to Women's Issues in Canada
An interdisciplinary study of current issues related to women's experiences in Canada. The focus will be on women's interaction with social structures and public policy and how these differ for different women's circumstances. Students who have taken WS 100 at SFU may not take WS 101 for further credit. Breadth-Social Sciences.

WS 102-3 Introduction to Feminist Theory
An historical and comparative survey of feminisms in Western Europe and North America. Students who have taken WS 100 at SFU may not take WS 102 for further credit. Breadth-Social Sciences.

WS 200-3 Women in Cross-Cultural Perspective
The focus will be on the situation of women in cross-cultural perspective using literary, historical, anthropological and other appropriate sources. Prerequisite: WS 101 or 102 (may be taken concurrently).

WS 201-3 Colonizing Women: Canadian Women in Historical Perspective, 1600-1870s
Examines the lives of Canadian women in the colonial context, including the role of women in European-Aboriginal relations, the founding of New France, and settlement in British North America. Themes such as sexuality, race, work, religion and politics will be explored through the study of primary documents and historical literature. Prerequisite: WS 101 or 102 (may be taken concurrently). Students who have taken WS 201 under the title Women in Canada, 1600-1920 may not take this course for further credit.

WS 202-3 Modernizing Women: Canadian Women in Historical Perspective, 1870s-1970s
Examines the historical development of women's experiences and identities in Modern Canadian history. Looks closely at the ways in which ethnicity, race, class and sexuality have shaped women's lives, and examines the continuity and changes in work, sexuality, politics and domesticity over the 19th and 20th centuries through the study of primary documents and historical literature. Prerequisite: WS 101 or 102 (may be taken concurrently). Students who have taken WS 202 under the title Women in Canada, 1920 to the Present may not take this course for further credit.

WS 205-3 Women and Popular Culture
A study of women's place in society as revealed through the analysis of a variety of media. Prerequisite: WS 101 or 102 (may be taken concurrently).

WS 207-3 Introduction to Feminist Theory
A study of concepts, controversies and processes of feminist social theory. Prerequisite: WS 101 or 102 (may be taken concurrently).

WS 208-3 Feminist Research Methods
Explores a variety of feminist research methods including the definition of feminist research, the qualitative/quantitative controversy, action research, participatory observation, survey, ethnography, case study, oral history, transnational study, interviews and research ethics. Prerequisite: WS 101 or 102 (may be taken concurrently). Students who have taken WS 208 under the title Researching Women's Issues or WS 400 Methodological Issues in Women's Studies may not take this course for further credit.

WS 301-303-4 Special Topics in Women's Studies
A specific topic within the field of women's studies, not otherwise covered in depth in regularly scheduled courses, will be dealt with as occasion and demand warrant. Prerequisite: six credits in women's studies including WS 101 and/or 102.

WS 304-4 Women and Religion
This course examines critical issues of women's relationships to theology and religious practice in major religious traditions. Prerequisite: six credits in women's studies including WS 101 and/or 102.

WS 305-4 Conceiving Creativity
Through the lens of science fiction, this course focuses on scientific and religious accounts of creativity, and of responsibility for (and to) the outcomes of that creativity. In considering the range of relations amongst science and religion, it draws upon theories from social justice studies, including such topics as representation, participation and motivation within professional and other community domains of creativity. Prerequisite: 30 credit hours. Students who have taken WS 310 (Special Topics) under this title may not take WS 305 for further credit. Breadth-Humanities.

WS 306-4 Women's Autobiographies, Memoirs, Journals
An examination of women's autobiographical writings, focusing on self images, self presentations and world views. Prerequisite: six credits in women's studies including WS 101 and/or 102.

WS 307-4 Women in British Columbia
Selected topics in the history of women's experience in British Columbia, with particular attention to women's work, political action and education. Prerequisite: six credits in women's studies including WS 101 and/or 102.
WS 308-4 Women in the Economy: Paid and Unpaid Labour
Explores the nature and conditions of women’s paid and unpaid labour in the economy as well as various theories of female labour market discrimination, the impact of national public policies on women’s labour and the transnational interconnections that affect women’s paid and unpaid labour. Prerequisite: six credits in women’s studies including WS 101 and/or 102. Students who have taken SA 335 and/or WS 310 or WS 308 under the title Women and Work may not take this course for further credit.

WS 309-4 Gender and International Development
Examines from interdisciplinary and international perspectives how development is gendered and creates differential impacts, meanings and processes for women and men around the world. Prerequisite: six credit hours in women’s studies including WS 101 and/or 102. Students who have taken WS 310 Special Topic: Women and Development or WS 301 Special Topic: Gender and Development or WS 309 under the title Gender and Development may not take this course for further credit.

WS 310-4 Special Topics in Women’s Studies
A specific topic within the field of women’s studies, not otherwise covered in depth in regularly scheduled courses, will be undertaken. Prerequisite: six credit hours in women’s studies including WS 101 and/or 102. Students who have previously taken WS 320 Special Topics in Women’s Studies or WS 312 or WS 412 under the title Women and Film may not take this course for further credit.

WS 312-4 Immigrants, Women and Transnational Migration
Examines the global division of labor where migrant women as well as immigrant women tend to be exploited in numerous forms, ranging from lack of citizenship rights and erasure of skills to the risk of sexual assault, due to immigration/migration and social policies of various countries. Prerequisite: WS 101 or 102. Students who have previously taken WS 320 Special Topics in Women’s Studies and Economic Security may not take this course for further credit.

WS 313-4 Women and the Environment
Examines women’s participation in environmentalism. Among the topics discussed will be the nature/nurture debate, the roots of environmentalism, ecofeminism and reproductive rights. Prerequisite: six credits of women’s studies including WS 101 and/or WS 102. Students who have taken this course as a women’s studies special topics course may not register for WS 313.

WS 314-4 Race, Class and Gender Relations
An examination of feminist, Marxist and anti-racist theories pertaining to the historical development, social construction, and interactive nature of race, class and gender relations. Prerequisite: six credits in women’s studies including WS 101 and/or 102. Students who have taken either WS 301 or 310 as Special Topics: Race, Class and Gender may not take this course for credit.

WS 315-4 Gender, War and Health
A critical examination of conceptualizations of, and interrelationships amongst, gender, war and health. The course will include such topics as total war, military-and medical-industrial complex, militarism and healthism, and professionalization in relation to societal constructions of gender roles in family, paid work and volunteer contexts. Prerequisite: One of WS 101 or 102, or GDST 200 (may be taken concurrently). Students who have taken WS 206 under these topics may not take WS 315 for further credit.

WS 316-4 Disciplining Sex: Feminist Science Studies and Sociobiology
Concepts which explain labor market discrimination have played a fundamental part in the development of evolutionary theories in biology and psychology. At the same time, feminist critiques of these conceptualizations have been a major factor in the development of Feminist Science Studies. The interactions amongst these three approaches are examined, including methodologies, communities of practice and societal implications. Prerequisite: 30 credit hours.

WS 320-4 Special Topics in Women’s Studies
A specific topic within the field of women’s studies, not otherwise covered in depth in regularly scheduled courses, will be undertaken. Prerequisite: six credit hours in women’s studies including WS 101 and/or 102. Students who have taken WS 310 or WS 308 under the title Women and Work may not take this course for further credit.

WS 323-4 Latin American Women in Literature and Society
This course will examine how women writers and artists from Latin America have represented themselves as gendered social, historical and philosophical subjects. Students who have taken LAS 323 may not take this course for further credit.

WS 334-3 Law and Human Reproduction
Overview of theoretical perspectives and available research on debates linked with human reproduction. Reconsideration of the effects of legislation, social policy and social change on contraception, birth, abortion, adoption and new reproductive technologies, sexualities, and other topics. Historical and contemporary examples will be used. Feminist perspectives will be featured along with other approaches to human reproduction. Prerequisite: this course is identical to CRIM 334 and students may not take both courses for credit. Students who have taken CRIM 416, 417, 418 under the title Law and Reproduction may not take this course for further credit.

WS 389W-4 Feminist Currents
Explores recent debates and future directions of feminist thought and introduces students to different models of feminist writing. The writing-intensive component of the course trains students to develop analytical, writing, and research skills through a variety of writing activities and assignments. Prerequisite: two of WS 101, 102, or GDST 200 (may be taken concurrently). Writing.

WS 399-4 Numeracy, Gender and Cultures
Through an examination of the social construction of numeracy, this course will provide an introduction to measurement and difference issues within social- justice movements. In analyzing such topics as the relationship between professional, state and community conceptualizations of mathematical competence, students will make use of introductory statistical concepts, methods and arguments. Prerequisite: two of WS 101, 102, or GDST 200 (may be taken concurrently). Writing.

WS 401-5 Research Project
Individual or small group studies of community problems. The students will submit a prospectus for the project at least two months before the study is undertaken. The project will be directed by one of the faculty members of the program. Prerequisite: nine credits in women’s studies including WS 101 and/or 102; permission of instructor; approval of course proposal by department.

WS 402-2 Directed Readings
Provides opportunities for individual tuition at an advanced level. Prerequisite: nine credits in women’s studies including WS 101 and/or 102; permission of instructor; approval of course proposal by department.

WS 403-3 Directed Readings
Provides opportunities for individual tuition at an advanced level. Prerequisite: nine credits in women’s studies including WS 101 and/or 102; permission of instructor; approval of course proposal by department.

WS 405-4 Theoretical Issues in Women’s Studies
A study and critique of feminist theories as they apply to the study of women. Each offering of the course will focus on a particular subset and applications. Prerequisite: 60 credit hours including two Women’s Studies courses, one of which must be WS 101 or 102. Students who have taken WS 311 or 411 may not take this course for further credit when it is submitted Feminist Psychoanalytic Theories.

WS 412-5 Women and Film, Films and Theories
An examination of film theory and practice from a feminist perspective. Prerequisite: 60 credit hours including two women’s studies courses, one of which must be WS 101 or 102. Students who have taken WS 312 or WS 412 under the title Women and Film may not take this course for further credit.

WS 421-3 Practicum I
First semester of work experience in the Women’s Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree; Prerequisite: 30 credit hours with a CGPA of 3.0; WS 101, 102 and two 200 division women’s studies courses. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

WS 422-3 Practicum II
Second semester of work experience in the Women’s Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 45 credit hours with a CGPA of 3.0; WS 101, 102 and two 200 division women’s studies courses. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

WS 423-3 Practicum III
Third semester of work experience in the Women’s Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 60 credit hours with a CGPA of 3.0; WS 101, 102 and two 200 division women’s studies courses. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

WS 424-3 Practicum IV
Fourth semester of work experience in the Women’s Studies Co-operative Education Program. Credits from this course do not count towards the credits required for an SFU degree. Prerequisite: 90 credit hours with a CGPA of 3.0; WS 101, 102 and two 200 division women’s studies courses. Students should apply to the Faculty of Arts co-operative education co-ordinator by the end of the third week of the semester preceding the employment semester.

WS 800-5 Methodology in Women’s Studies Research
An interdisciplinary seminar in methods of research in women’s studies. Students will examine theoretical issues in women’s studies methodology and study examples of research and criticism from women’s studies in history, art/literary criticism, philosophy, psychology and social and natural sciences. Emphasis will be placed on developing a rigorous and creative interdisciplinary approach to problems. Students will apply methods studied in the course to their own areas of concentration.

WS 820-5 Graduate Seminar in Women’s Studies History
This course will examine one or two critical issues in the history of women. Course work will be designed to reflect on significant works of women’s history and to help students develop the research and writing skills necessary for the history of women’s studies. Course work will be designed to reflect on significant works of women’s history and to help students develop the research and writing skills necessary for the history of women’s studies.
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WS 821-5 Graduate Seminar in the Psychology of Women
This course will consist of an in depth exploration of both traditional and feminist theories of the development of female personality. Special consideration will be given to the impact of social and economic factors on women’s psychology and the extent to which such factors are or are not taken into account.

WS 822-5 Graduate Seminar in Feminist Theory
This course will analyse and compare major feminist social and political theories, including those that have emerged from liberal, socialist and radical feminist traditions. The relationship among theories of sexism and political goals and practices will be discussed.

WS 823-5 Graduate Seminar in Feminist Art/Literary
This course will examine the development of feminist aesthetic theories with particular reference to literary, cinematic and/or art forms. The fundamental assumptions of feminist literary and/or art criticism as well as the principles of art forms will be discussed.

WS 824-5 Graduate Seminar on Women and Social Policy
This course will focus on one or more social issues and policies in such fields as law, health, economics, social welfare, and science and technology.

WS 825-5 Graduate Seminar in Women, Technology, and Social Change
This course will focus on relationships between changes in the technological and scientific bases of a society and changes in other major aspects of that society, particularly as they affect women’s roles and ideas about women. Emphasis will be on Europe and North America.

WS 830-5 Selected Topics Graduate Seminar I
WS 831-5 Selected Topics Graduate Seminar II
WS 840-5 Directed Studies
WS 898-6 MA Thesis
WS 899-6 MA Extended Essays
WS 997-0 PhD Comprehensive Examination
WS 998-6 PhD Thesis
WS 999-6 MA Field Exam
Prerequisite: completion of six graduate courses.

World Literature WL
Faculty of Arts and Social Sciences
WL 100-3 Introduction to World Literature
Explores how texts resonate in other cultural contexts, influence foreign traditions, and become works of world literature.

WL 101-3 Writing Global Migration
Explores international migration in world literature. May compare the texts of migrants and citizens, focus on a case study of migrants to and from a particular city or nation, or compare immigrant writings across cultures.

WL 102-3 Literature Across Cultures
Explores moments of cross-cultural interaction, encompassing the literature of exploration, empire, post-imperial culture, and canonical or contemporary travelogues.

WL 103-3 Pre-Modern World Literature
Surveys pre-modern texts of world literature.

WL 104-3 Modern World Literature
Survey poetry and prose from the seventeenth-century to the present, with a focus on the literary exploration of issues of humanity.

WL 200-3 Literary Analysis and Interpretation
Introduces major theoretical approaches to literature and fundamental techniques of literary analysis. Develops students’ critical skills for analytical writing about literature in comparative, cross-cultural contexts. Prerequisite: nine credit hours in World Literature, including WL 100, 103, or 104.

WL 201-3 East/West
Explores the relationship between Eastern and Western narratives. The focus may include the mutual influence of Eastern and Western cultural traditions and modernities, the construction of the ‘East’ in the West and of the ‘West’ in the East, theories of Orientalism and Occidentalism, and forms of East/West syncretism. Prerequisite: three credit hours in World Literature or six credit hours of B-Hum designated courses.

WL 202-3 North/South
Explores how European traditions have influenced and engaged the cultures of the global ‘South’. The focus may encompass the cultures and counter-cultures of empire and globalization and the ‘tropicalization’ of European genres and cultural forms under the influence of artists from Africa, Latin-America, and South Asia. Prerequisite: three credit hours in World Literature or six credit hours of B-Hum designated courses.

WL 203-3 Selected Genres in World Literature
Explores the cross-cultural trajectory of a genre or genres of world literature. Prerequisite: three credit hours in World Literature or six credit hours of B-Hum designated courses.

WL 204-3 Human Rights Literature
Examines a diversity of world literature concerning Human Rights. May focus on writing in the face of political oppression, censorship, political and economic displacement, terrorism and/or warfare. Prerequisite: three credit hours in World Literature or six credit hours of B-Hum designated courses.

WL 300-4 How Travel Trains
Explores the counterpoint of Western and non-Western approaches to world literature. May draw from disciplines including comparative literature, history and anthropology, and focus on how concepts of world literature are imported into new cultural contexts. Prerequisite: 12 credit hours in World Literature, including WL 200.

WL 301-4 Imperial Cultures
Explores the cultures of imperialism in a cross-continental and comparative framework. May focus on chronology, national colonial contact, critiques of empire, and the imperial engagement with pre-conquest cultures. Prerequisite: 45 credit hours including nine credit hours in World Literature or nine credit hours of B-Hum designated courses.

WL 302-4 Post-Imperial Cultures
Explores post-imperial notions of culture and universality, tradition and modernity, or nation and cosmopolis. May focus on narratives of independence, postcolonial self-fashioning, and imperial nostalgia. Prerequisite: 45 credit hours including nine credit hours in World Literature or nine credit hours of B-Hum designated courses.

WL 303-4 Global Culture and Its Others
Explores cultural expressions of sameness and difference in an age of globalization and its discontents. May focus on transnational expressions of secularism and faith or of the metropolis and subrubia, or on forms of cross-pollination in world literature, cinema and music. Prerequisite: 45 credit hours including nine credit hours in World Literature or nine credit hours of B-Hum designated courses.

WL 304-4 Exile and Émigré
Explores the cultural lives of peoples and individuals displaced by force or migrating by choice. May focus on the plight of refugees in the work of playwrights, essayists and novelists, on the work of émigré artists in different cultural traditions, or on a comparison of the literary cultures of exiles and émigrés.

Prerequisite: 45 credit hours including nine credit hours in World Literature or nine credit hours of B-Hum designated courses.

WL 305-4 Sages and Poets
Explores wisdom literature, poetry, or the resonance of faith in secular world literatures. May focus on cross-cultural mystical quests, secular re-castings of narratives of faith and conversion, or the interplay of the religious and the secular in comparative supernatural literatures. Prerequisite: 45 credit hours including nine credit hours in World Literature or nine credit hours of B-Hum designated courses.

WL 400-4 Literary Perspectives on Ancient Cultures
Explores the discovery, resonance, and/or influence of ancient literature and culture. May focus on the role and poetics of ancient cultures in modern writing. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 401-4 Early Modernities
Explores early modern literature across cultures. May compare Eastern and Western texts or focus on the cross-cultural influence of a single genre or author. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 402-4 Other Modernities
Explores the mutual constitution of modernity in North and South. May focus on modernism and its enemies, case studies of alternative modernities, or the pre-modern in discourses of modernity and anti-modern. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 403-4 After Modernities
Explores works of contemporary world literature in the second half of the twentieth century. May focus on the postmodern as a response to the modern, on prevalent postmodern genres, or on the postmodern engagement with developments in philosophy, science, and the media in East and West. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 404-4 Literature in Translation
Explores how texts not only lose but gain in translation through a consideration of the discovery and reception of ancient and canonical texts in new cultural contexts. May compare ancient texts or focus on a single work that has been reconceived in several cultures. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 410-4 Selected Topic in World Literature I
Advanced seminar on a topic in World Literature. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 420-4 Selected Topic in World Literature II
Advanced seminar on a topic in World Literature. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 430-4 Selected Topic in World Literature III
Advanced seminar on a topic in World Literature. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 440-4 Selected Topic in World Literature IV
Advanced seminar on a topic in World Literature. Prerequisite: 60 credit hours including two 300 level courses in World Literature, English, or Humanities.

WL 450-4 Directed Readings in Language and Literature
Independent study of literature in a language other than English. Prerequisite: Admission by permission of the instructor and department.

WL 480-4 Research Seminar for Honors Essay
Examines the methods and methodologies of world literature by focusing on case studies of influence,
reception and translation. The case studies will be chosen in relation to students’ approved topics for honors essays. Students will present research for their honors essay to the class. Prerequisite: Lower division and language requirements for the World Literature major plus 12 credits of upper division requirements including WL 300. Open only to students who have been accepted into the World Literature honors program. Admission is by permission of the Instructor and the Department.

**WL 490-4 Honors Graduate Essay**
Examine the methods and methodologies of world literature by focusing on case studies of influence, reception and translation. The case studies will be chosen in relation to students’ approved topics for honors essays. Students will present detailed research and well-developed drafts of their essay to the class. In addition to the weekly seminar, honors students will meet regularly with their supervisors. Prerequisite: Lower division and language requirements for the World Literature major plus 12 credits of upper division requirements including WL 300. Open only to students who have been accepted into the World Literature honors program. Admission is by permission of the Instructor and the Department.
Academic and Campus Services

Academic Computing Services
1001 Strand Hall, 778.782.3234 Tel, 778.782.4242 Fax, www.sfu.ca/acs
Academic Computing Services (ACS) provides on-campus and home access to electronic mail, learning management systems, web conferencing systems, programming environments, and to the Internet in general. ACS offers Simon Fraser University computing IDs to all students, faculty and staff to enrol in classes, send and receive e-mail, use the campus labs, access the library, and to use many other electronic resources. Web publishing space and general file storage space is provided to all students, faculty and staff. ACS provides specialty software for instructional use, statistical analysis, web and database programming. A 24 hour help line is available at 778.782.3230 or via help@sfu.ca. In-person student assistance is available in the campus labs in the library and at AQ3148, or telephone 778.782.3530. In-person help for faculty and staff is available from several ACS consultants.

Alumni Association
007 Diamond Alumni Centre, 778.782.GRAD (4723) Tel, 778.782.6776 Fax, alumni@sfu.ca, www.sfu.ca/alumni
Every person who has completed a degree, certificate, diploma or Professional Development Program is a lifetime member of the Alumni Association, which provide an engaging and mutually beneficial lifetime link between Simon Fraser University and its community of alumni. The association offers communications, events, benefits and services for our current and future alumni. The Alumni Relations office works closely with the Alumni Association to keep alumni informed, involved and invested in the alumni community and future of Simon Fraser University.

Archives and Records Management
0400 Maggie Benston Student Services Centre, 778.782.3261 Tel, 778.782.4047 Fax, www.sfu.ca/archives
Archives' mandate is to acquire original archival materials that document all programs and activities of the University or that enhance its teaching and research programs. The University archives acquires three major categories of materials:

- official University records including those created by the board of governors, senate, University committees, faculties, departments and administrative offices
- materials documenting the wider University community including private papers of groups such as the Simon Fraser University Faculty Association, Simon Fraser Student Society, University labor organizations and the private papers of prominent individual faculty, staff and students
- private historical research collections including the Association of Canadian Publishers (ACP), John Howard Society (JHS), W.A.C. Bennett and numerous collections relating to women’s issues.

Archives also holds non-circulating original copies of all theses and dissertations approved by the University.

The University's archives are a multimedia collection including film, video and sound recordings, maps, plans and architectural drawings, documentary art, photographs, and digital records.

Services to Researchers
The reference area is equipped with audio and video equipment. Arrangements can be made for viewing films. Reproduction requests for photocopies and photographic copy prints are accommodated whenever possible. Finding aids to various collections are available in hard copy or on the archives website. Information is available about archival collections at other repositories.

Services to the Institution
To help fulfil its mandate, archives administers a records management program for the University. The department also operates the University Records Centre (URC), providing temporary storage for official, semi-active University records. Archives staff provide consulting and training support to campus offices concerning record-keeping policy, practices, records retention and disposal. The department also co-ordinates copyright compliance, administers the University’s access to information and privacy program, and responds to all formal access requests submitted under the Freedom of Information and Protection of Privacy Act.

Service Hours
Archives is open for researchers 9 am – 12:30 pm and 1:30 pm – 4 pm, Monday to Friday.

Canada Post
Located inside 8961 Cornerstone Mews, Burnaby, BC V5A 4Y7, 778.782.3098 Tel, 778.782.4783 Fax, post_office@sfu.ca.

The post office is a full service Canada Post Outlet offering the sale of stamps, packaging, shipment tracking, and other material to ensure your package arrives at its destination.

Post office hours are Monday to Friday, 10 am – 4:30 pm.

Centre for Students with Disabilities
1250 Maggie Benston Student Services Centre, 778.782.3112 Tel, 778.782.5457 TTY, www.sfu.ca/csd
The Centre for Students with Disabilities was established to improve accessibility at Simon Fraser University by developing and updating University policies, procedures and programs. The Centre provides direct services to students with a disability including: assistance with note-taking; tutor support; access to adaptive technology; support for exam modifications; general advocacy, etc. Students requiring any of these services are expected to supply current documentation at their own expense. Contact the centre as soon as possible, preferably three months prior to the start of a term.

The centre has an equipment lab of computers with access software (e.g. magnification, voice-to-text), a scanner, a Braille printer and a CCTV (closed circuit television for text or graphic enlargement). Computers in the lab are on adjustable tables.

The centre also works with other University departments to ensure appropriate services are in place and provides information about accessible off-campus housing and accessible parking.

Course materials in alternate formats are also available through interlibrary loans in the Bennett Library. To avoid possible delays, contact the centre at least three months prior to the start of the term.

Contact the centre for more information during office hours, Monday to Friday, 9 am – 4 pm.

Chartwells Dining Services
Administrative Office, 2028 Academic Quadrangle, 778.782.4481 Tel, foodservices@sfu.ca, www.compass-canada.com/Simon Fraser University
Chartwells Dining Services is pleased to be a part of the academic community and is proud to serve its staff, faculty and students.

Chartwells provides a variety of food outlets offering well-balanced, nutritional meals, fast food services, catering for groups, and a convenience store. Our Meal Plan enables students, faculty and staff to purchase meals on a prepaid account from any of the following dining locations throughout the year. The program works just like a debit card; you prepay by depositing a chosen dollar amount into the Chartwells Meal Plan account. For further information, stop by our office or refer to our dining plan brochure.

Alexander MacKenzie Café
Located on the Academic Quadrangle’s East Concourse.

Morning Editions — special breakfasts
Culinary Table — meat and vegetarian entries
Fresh Grille — burgers, combos, weekly burger and sandwich specials
Double Treat Bakery — freshly baked assorted pastries
Sandwich Central — ciabattas, paninis, custom made sandwiches; look for the feature of the week with a variety of fillings and breads
On The Go — pre-made sandwiches, subs, kaisers, salads, sushi

Simon C’s Convenience Store
Our convenience store offers On the Go, Double Treat Bakery, Starbucks™ Gourmet Coffee, fresh fruit, sandwiches, salads, snacks, ice-cream, beverages, groceries, stamps, greeting cards, candy, health and beauty aids, cigarettes, newspapers, magazines and more. Located on the 2000 level of the Academic Quadrangle’s James Douglas Room.

Triple O’s by White Spot™
‘Legendary’ hamburgers, fries, hot dogs, chicken burgers, chicken strips, milkshakes, breakfast sandwiches and more. Located on the 2000 level of the Academic Quadrangle.

Impressions Catering
We specialize in catering to conferences, office groups, clubs, business meetings, or any special event. Contact the catering manager at 778.782.4510 to make arrangements or drop by AQ 2028 to pick up our catering brochure. You can fax your order to 778.782.5661 or email catering@sfu.ca.

Raven’s Café
Situated in the West Mall Complex on the 2000 level, Raven’s offers the best views on campus as well as outdoor seating. You can enjoy Starbucks™ regular and gourmet coffees, hot or on ice, at the Bistro. It also offers daily features such as our Morning Editions special breakfasts, Fresh Grill (meat and...
vegetarian entrées, burger specials), pastas, salads, gourmet sandwiches, freshly made pizza by the slice, and a variety of desserts and Double Treat Bakery items. Check out the On The Go pre-made selections. Look for Local Grown products such as Ocean Wise Seafood and Sustainable Food Programs.

Diamond Alumni Centre
Lunch reservations 778.782.4794, thedad@sfu.ca, www.sfu.ca/dac

The Diamond Alumni Centre, located on the north slope of Burnaby Mountain, is in the absolute idyllic setting. This beautiful facility is further enhanced by natural timbers, stone fireplaces and abundant greenery to complement the panoramic view of the North Shore mountains, Deep Cove and Indian Arm. Our professional services and gourmet food ensure that your experience with us will be special and memorable. We offer catering for up to 400 people for stand-up receptions and special events. We can accommodate up to 200 people seated for special events including business meetings, dinners, retirement parties and wedding receptions. We also offer Local Grown products such as Ocean Wise Seafood and Sustainable Food Programs. Check out Pizza Galore, fresh daily salads and soups, The Deli Corner, and a beverage island featuring special blends of Ritzazza coffee, teas and cold beverages. We have a convenience store, and accept cash or debit payment for these convenience store items.

CJSF 90.1 FM Radio
216 Transportation Centre, 778.782.3727 Tel, 778.782.3695 Fax, www.cjsf.ca

CJSF 90.1 FM is Simon Fraser University's campus radio station and is funded by Simon Fraser University students. The station provides programming content rarely available from mainstream media. CJSF offers a variety of non-commercial music from all genres as well as special interest spoken word programming. The station airs public service announcements from mainstream media. CJSF also sponsors the following services for the campus community.

Public Events
The school presents a free performance, film screening, concert or artist's demonstration in the SFU Theatre every Thursday at 12:30 pm during fall and spring terms. In addition, more than 100 performances and visual art shows are scheduled throughout the year in the SFU Theatre, Studio II, the Martin Bartlett Performance Space at Alexander Centre downtown, and the school's studios. Programming for both the noon series and evening events features a mix of professional touring artists and the school's students. For information, contact the SFU Theatre box office at 778.782.3514.

Professional Development Offerings
Praxis Film Development Workshop, 778.782.3100, offers a resource centre, intensive workshops, public seminars, and courses on film-related topics.

First Nations Student Centre
1500 Maggie Benston Student Services Centre, 778.782.3555/5563 Tel, 778.782.5682 Fax, Monday to Friday, 8:30 am – 4:30 pm

The centre offers culturally-relevant, responsive, holistic student support services and programs to self-identified Aboriginal students (First Nations, Métis, Inuit). It develops academic support programs including student orientation, graduation activities, Aboriginal speakers and events. It provides referrals to, and information concerning, university and Aboriginal community resources. Services include band/agency liaison, fax services, job and event postings, and information on awards and funding. A First Nations academic advisor helps with academic program planning, application and registration procedures, course selection and withdrawals, and with appeals and retroactive withdrawals. Please call 778.782.4055.

In the First Nations Student Association lounge, located in TC 3108, students can meet and study in a relaxed atmosphere 24 hours a day.

Bureau des affaires francophones et francophiles (BAFF) / Office of Francophone & Francophile Affairs (OFFA)
Cornerstone, 198-8960 University High Street, Burnaby, www.sfu.ca/baff-offa

BAFF/OFFA’s primary mission is to develop as well as co-ordinate and promote French language programs at Simon Fraser University (see below), and to organize cultural activities promote the value of French both on and off campus. We invite you to visit our websites for further information about the office and its programs.

School for the Contemporary Arts
778.782.3363 Tel, 778.782.5907 Fax, www.sfu.ca/sca

Information about the School for the Contemporary Arts teaching programs can be found in the undergraduate and graduate Faculty of Arts and Social Sciences sections (see “School for the Contemporary Arts” on page 139 and page 285). The School also sponsors the following services for the campus community.

George and Ida Halpern Centre
Halpern Centre, 778.782.4910 Tel, 778.782.3420 Fax

The Halpern Centre was donated to the University as a setting for cultural and intellectual endeavors which are not part of the scheduled University credit offerings. The centre is a venue for events of the highest scholarly, social and cultural value, including lectures by distinguished visitors, discussion groups, seminars, learned conferences, dissertation defences, art exhibits, musical performances, etc. The centre may be booked by University departments and community groups whose activities are consistent with the centre’s stated purposes. There is no rental fee for University-sponsored events. Space bookings, reserved by a University individual, require sponsorship of the individual's department or, in the case of student clubs or unions, through the Simon Fraser Student Society.

Health and Counselling Centre
0101 Maggie Benston Student Services Centre, 778.782.4112 Tel, 778.782.5888 Fax, hccc_admin@sfu.ca, www.sfu.ca/hccc

For more information regarding any of our services, visit our website at www.sfu.ca/hccc

Our Mission
To promote and provide holistic and innovative health care and health promotion that is readily accessible and sensitive to the diverse needs of our students and campus communities.

Our Vision
Promoting holistic health in the pursuit of academic and community achievement.

Our Shared Values
• holistic health that incorporates mid body wellness and encompasses emotional, physical, psychological, social, spiritual and environmental domains.
• collaboration with others in meeting our mission and reaching our vision.
• compassion for each other and our community
• commitment to learning and innovation
• integrity in everything that we do
• responsive to the needs of our diverse community.

Key services include health clinic services, health promotion, physiotherapy, personal counselling and outreach.

Health Clinic
0101 Maggie Benston Student Services Centre, 778.782.4615 Tel, medical emergencies 778.782.4500
300 Simon Fraser University Vancouver, 778.782.5200 Tel, medical emergencies (via Security) 604.522.5252
After hours physicians: 604.522.2311, 6 pm – 7 am, Monday to Friday, weekends and holidays

Visit one of our doctors or nurses for all your medical needs in a strictly confidential environment. Book an appointment or walk-in. Services for students include primary health care, urgent care, vaccinations, allergy shots, travel medication, birth control, pregnancy testing, sexually transmitted infection screening, and minor procedures, to name only a few. Urgent medical care is also available for Simon Fraser University staff and faculty.

Health Promotion
0164 Maggie Benston Student Services Centre, 604-291-4587 Tel, health_promo@sfu.ca

The health promotion team works hard to foster healthy students and a healthy campus community.
We offer healthy living sessions and events, and work with other campus groups to build a healthy campus environment. Our areas of focus are active living, nutrition, sexual health, substance use and abuse prevention, mental health and stress management, illness and injury prevention.

**Physiotherapy Clinic**
070 Chancellor Gymnasium Centre, 778.782.3284 Tel, hccc_physio@sfu.ca
Our physiotherapist provides expertise and knowledge for the best treatment, rehabilitation and preventative programs. Services are available to all Simon Fraser University community members including UniverCity residents. No doctor referral is required except for WCB or ICBC claims. The physiotherapy clinic is located within the Athletic Complex at the Burnaby campus.

**Personal Counselling**
0101 Maggie Benston Student Services Centre, 778.782.4615 Tel
The Health and Counselling Centre recognizes the unique pressure and stress that students endure. Our counsellors help manage the challenges of university life, and academic and personal goals with free short-term counselling, group discussions, and workshops. Discussions are confidential. Same day appointments are available for initial visits and for students in crisis. If you want to talk, we are here.

**SFU Nightline**
604.857.7148 evenings, weekends and holidays
This telephone crisis intervention service provides peer counselling and support, information and referrals after regular office hours. Our student volunteers undergo extensive training using a crisis-intervention model. When you call Nightline, an answering service will answer and put you through to a student volunteer within 10 minutes. For more information, visit www.sfu.ca/hc/cc.

**HCC to go**
0164 Maggie Benston Student Services Centre, 604.291.4692 Tel, outreach_coordinator@sfu.ca
Health and Counselling Centre (HCC) services extend beyond the centre into the campus community. Many services that we provide ‘in-house’ can also be delivered to the campus location of your choice. Contact us to arrange a professional staff or peer educator presentation, workshop or outreach session.

Popular topics include nutrition, work/life balance, stress management, and healthy relationships. For more information, visit www.sfu.ca/hc/cc.

**Human Rights Office**
3045 Academic Quadrangle, 778.782.4446 Tel, 778.782.5468 Fax, betaylor@sfu.ca, www.sfu.ca/hro
On April 7, 2003 the Simon Fraser University Board of Governors approved changes to GP 18, the Harassment Policy, which expanded the policy’s scope to include discrimination as a proscribed behavior. As such, the Human Rights Policy responds to the University’s obligations under the BC Human Rights Code to provide a discrimination and harassment free environment for the students, faculty and employees. The objectives of the expanded policy are to encourage the University community about human rights issues and to provide procedures by which complaints of discrimination and harassment can be addressed, mediated and resolved.

To reach the Director of Human Rights, visit, telephone, fax or email at the numbers and addresses shown above. Normal business hours are Monday to Friday, 8:30 am – 4:30 pm but the office is frequently closed when mediation sessions, meetings or seminars are in process. Appointments are necessary but can often be scheduled on the same day when contact is made with the office.

The principles of natural justice and impartiality govern the complaint process. The director can offer advice and assistance to those dealing with situations on their own, or mediation services can also be provided. In exceptional circumstances, formal complaints are referred to an external investigator who is an experienced administrative lawyer.

For more information about the Human Rights Policy, including the definition of discrimination and harassment and the types of harassment it covers, please visit our website.

**Interfaith/Chaplaincy Centre**
3174 Academic Quadrangle, 778.782.3180 Tel, http://students.sfu.ca/interfaith
The University is served by an interfaith chaplaincy comprising eight chaplains representing the Christian faith and other religions. They provide a wide spectrum of spiritual and pastoral services, and help anyone including students, staff and faculty.

For special events, weekly services and meetings, call the office. Students are warmly invited to visit our drop-in centre and reading room, 9:30 am – 3 pm, Monday to Friday.

**Learning and Instructional Development Centre (LIDC)**
7560 Education Building, 778.782.3910 Tel, 778.782.4900 Fax, www.sfu.ca/lidc, Monday to Thursday, 8:30 am – 4:30 pm, Friday 8:30 am – noon, 1 – 4:30 pm.
Our mission is to help create an enriched academic environment at Simon Fraser University by supporting and promoting effective teaching, stimulating and conducting research and scholarly activity, assisting in the integration of instructional technologies, and providing media services and classroom support to the university community.

**Educational Support & Innovation (ESI), LIDC**
7560 Education Building, 778.782.3910, 778.782.4900
This group provides a wide variety of services to faculty and other instructional staff, including instructional development and support by:
- delivering workshops to various groups
- assisting teachers with face-to-face teaching
- supporting technology integration in courses
- providing a consultation on the preparation of teaching portfolios, teaching evaluations, and student assessment methods
- helping to develop a resource centre on teaching, learning and technology in teaching

ESI also co-ordinates and organizes instructional development and educational technology programs (workshops, seminars, lecture series, symposia and conferences) and services (consultations, publications, and resource library) for Simon Fraser University’s academic community to enhance the quality of teaching and learning at the University. Some of our programs include:
- Certificate Program in University Teaching and Learning
- Annual Symposium on Innovative Teaching
- Annual fall and spring term TA/TM Days
- Instructional Skills Workshop

**Writing-Intensive Learning Office (WIL0, formerly CWIL)**
The mission of WIL0 is to cultivate and sustain a vibrant culture of writing and learning across the university community. This unit hosts community events and seminars, and provides workshops to instructors and graduate students. WIL0 develops and provides resources and strategies for instructional writing-intensive courses. By collaborating with instructors and university units, WIL0 also helps to evaluate new approaches to the teaching of writing and collaborates in community writing groups, projects and programs.

**Classroom Technology Assistance, LIDC**
P9301 Shrum Science Centre, 778.782.4828 Tel, 778.782.4616 Fax, Monday to Thursday, 8 am – 10 pm, Friday 8 am – 4:30 pm
2622 West Mall Centre, 778.782.5538 Tel, Monday to Thursday, 8 am – 8 pm, Friday 8 am – 4:30 pm
The Classroom Technology Assistance Centre has two locations. Audio, visual and computer equipment for classroom projects is available for loan to students as well as advice and instruction in the proper use of equipment. When requested by faculty, audio recordings of lectures are produced for student use. Lectures can be accessed on the web at www.sfu.ca/lectures.

**Media Design Group, LIDC**
7560 Education Building, 778.782.3910 Tel, 778.782.4900 Fax, www.sfu.ca/lidc
We provide leadership and service in media and communications technology for the advancement of university teaching and learning. Our media staff provides comprehensive media capability in both conventional and digital formats using the current technology. We find creative solutions to problems, we offer guidance and support through consultation, and we are pleased to assist with your projects.

**Technical Services, LIDC**
7528 Education Building, 778.782.4755 Tel, 778.782.3199 Fax
Technical Services keeps the University’s classrooms as contemporary as possible through expertise in research, design, installation, and service. Advice is offered to staff, faculty, students and special interest groups about lecture theatre operations. Other services include sales of audio visual materials, the dissemination of cable and satellite services over the in-house CATV system, video conferencing, and webcasting. Expertise is offered to those wishing to purchase or evaluate equipment, plan system installations, or learn about new technologies.

**Library Services**
Samuel and Frances Belzberg Library
Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver, BC, V6B 5K3, 778.782.5050 Tel, 778.782.5052 Fax, www.vancouver.sfu.ca/belzberg
The Belzberg Library supports teaching, research and lifelong learning at Simon Fraser University. Vancouver. It provides reference assistance, instruction, liaison, borrowing, course reserve items, and materials requests from the W.A.C. Bennett Library and Simon Fraser University Surrey Library.
On-line services, including the library catalogue, full text databases, electronic journals, and access to Web sources, form an essential element of this ‘electronic’ library.

The library collection, which supports Simon Fraser University Vancouver courses and programs, consists of books, periodicals, and several hundred journal titles as well as microfilm, fiche, and digital collections. In addition, students have full access to the other Simon Fraser University campus libraries, including almost 2.5 million items and extensive online collections at the main Bennett Library in Burnaby.

The Samuel and Frances Belzberg Library was developed through the generous donation of the Belzberg family.

Library hours: Monday to Thursday 10 am – 9 pm; Friday 10 am – 7 pm; Saturday 10 am – 5 pm; Sunday 10 am – 5 pm (fall and spring terms). Service hours may be reduced during term breaks, summer term, and public holidays.

W.A.C. Bennett Library
Burnaby campus, library hours 778.782.4351, library information 778.782.3869, Fax 778.3023, www.lib.sfu.ca

The library provides a range of collections, services, space, and technology to support students, researchers and faculty in their academic pursuits.

Collections
The library has over 2.7 million books and subscribes to over 54,000 journals, of which over 47,000 are online.

Strong collections are available in all disciplines taught at the University. The library website provides collections access for Simon Fraser University researchers on or off campus through the library catalogue, indexes to journals, electronic journals, and other digital resources. Special Collections include the contemporary literature collection for the avant-garde poet student, the finest William Wordsworth collection in Canada, the Wask-McDonald Aldine collection, expansion collections of BC publishing materials, British Columbia literary, social, and political materials, editorial cartoons, significant manuscript and archival collections. The curriculum collection contains curriculum guides and suggested readings prescribed by the Ministry of Education for use in BC schools. A growing collection of sound recordings, scores, slides, dvds, videos and films is available in the Media Resource Centre. The maps, data, and GIS unit provides access to computer-readable files of statistical and other data such as survey, census and GIS files, and over 115,000 maps.

Information
Librarians are eager to help you find library resources, suggest research strategies, and answer questions. Visit them at the third floor Alumni Information Commons help desk, Monday to Thursday 9 am – 8 pm; Friday 9 am – 6 pm; Saturday and Sunday 10 am – 6 pm. Off-campus users can reach a librarian online via the AskAway live chat reference service Sunday to Thursday 10 am – 9 pm; Friday and Saturday 11 am – 5 pm, via email at libask@sfu.ca.

Research skills classes are offered at the start of each term to provide a hands-on introduction to effective research techniques. Liaison librarians provide customized, course-specific research instruction at the request of faculty.

Space
Designated quiet study carrels are located on the fourth, fifth and sixth floors, with a silent study room on the fifth floor. Group study rooms are on the second floor and may be reserved through the library website. The library, in consultation with the Simon Fraser University Centre for Students with Disabilities, provides assistance to students with disabilities through facilities such as reserved study rooms.

Technology
The Alumni Information Commons on the third floor has PC and Mac computers, laser printers, color printers, scanners and application software such as Microsoft Word. Technicians are available at the Alumni Information Commons help desk to assist with problems. Students can also access microform readers and printers, tape listening facilities and photocopying machines at the library. A laptop computer lending program is available and bring-your-own-laptop carrels are available on the sixth floor, with wireless access on the second to fifth floors. Adaptive technology is available for students with disabilities.

Using the Library
The Simon Fraser University student identification card is also a library car, and is required to borrow materials. Reserve materials are assigned short loan periods of two hours to one week, to increase availability for specific courses. Lecture recordings for selected courses are accessible digitally.

Faculty and students are eligible for a free library card from other Canadian university libraries. Document delivery services provide access to materials not held at Simon Fraser University through agreements with BC and other post-secondary libraries, as well as providing delivery of the University’s collections to Distance Education students.

Hours
Monday to Thursday 8 am – 11:45 pm; Friday 8 am – 8 pm; Saturday and Sunday 10 am – 10 pm.

Normally, the building closes during statutory holidays. For service hours information, visit the library website at www.lib.sfu.ca/about/hours.htm

Simon Fraser University Surrey Library
Simon Fraser University Surrey Library, 778.782.7411 Tel, 778.268.7420 Fax, www.lib.sfu.ca/about/surrey/ This library supports teaching, learning and research at Simon Fraser University Surrey. A full range of services, including reference, liaison, instruction, circulation, course reserves and document delivery are offered. The library lends laptop computers, digital camcorders and other equipment for classes or assignments.

The on-site collections support Simon Fraser University Surrey programs and include 12,000 books, 90 print journals, DVDs, videos, CDs, CD-ROMs and games. Students can arrange Surrey campus delivery of items from the Burnaby and Vancouver libraries, thereby providing access to an additional 2.5 million titles. The library’s on-line collection (35,000 e-books, 25,000 e-journals, 500,000 art e-images and hundreds of databases) can be accessed on the web at any time, anywhere.

Microcomputer Store
8961 Cornerstone Mews, Burnaby, BC V5A 4Y7, 778.782.3098 Tel, 778.782.4783 Fax, www.sfu.ca/microstore, micro_store@sfu.ca

The Microcomputer Store sells educationally-priced computer hardware, software, supplies and accessories to current Simon Fraser University students, staff and faculty. Educational discounts are available on a wide range of computer hardware (Apple, DELL, HP, Lenovo, Sony, etc.) and software (Adobe, Corel, FileMaker, Microsoft, Symantec, etc.). Our staff are knowledgeable and will help you choose the right product for your work. The store stocks hardware, software, toner, memory, CD media, paper, cables and other accessories for your convenience. We also have demonstration computers, monitors and printers for you to evaluate.

Our service shop can upgrade and/or repair most computer equipment. Store hours are Monday to Friday, 10 am – 4:30 pm.

Museum of Archaeology and Ethnology
8602 Northeast Concourse, Academic Quadrangle, 778.782.3325 Tel, 778.782.5666 Fax, www.sfu.ca/archaeology/museum/index.html, Monday to Friday, 10 am – 4 pm, closed on statutory holidays.

The museum exhibits and collects objects from around the world, with a specific emphasis on the archaeology and ethnology of BC First Nations, especially the Northwest Coast. Virtual exhibits on many topics can be found on our website.

Ombuds Office
2205 Maggie Benston Student Services Centre, 778.782.4563 Tel, 778.782.3899 Fax, ombudsoffice@sfu.ca

The Ombuds Office is dedicated to promoting fairness for all University community members. The Ombudsperson provides information about existing review or appeal procedures, and advises on, and assists with, informal complaint resolution and problem solving processes. The Ombudsperson may also inquire into the administration of University practices, procedures, processes and policies.

Centre for Online and Distance Education
1300 West Mall Centre, 778.782.3524 Tel, 778.782.4984 Fax, toll free within Canada 1.800.663.1411, www.sfu.ca/ode

Courses offered through the centre provide an alternative to traditional classroom learning for those who cannot attend scheduled classes in person. Since 1975, when Simon Fraser University introduced its first distance education courses to 55 students, the program has grown to over 13,500 course enrolments a year in over 150 credit courses.

All courses carry full university credit and run parallel to the on-campus offerings. Students may complete many certificate, diploma and degree programs entirely by distance education, or students may take a combination of distance education, evening or day courses to fulfill their academic requirements.

Increasingly, students enrolled in courses offered through the centre benefit from the use of technology that is designed to meet specific learning needs. Depending on the courses, students will receive study material either online and/or in print. Other course-related components (for example, CDs, DVDs, lab materials, equipment, etc.) are also prepared by and distributed through the centre.

Each course is assigned a tutor marker who is responsible for grading assignments and assisting students with course work. All have scheduled office hours for telephone and/or email consultation.

The Peak Newspaper
2901 Maggie Benston Student Services Centre, 778.782.4560, www.peak.sfu.ca

Published weekly each term, The Peak is Simon Fraser University’s independent student newspaper. Students may place free personal classified ads, sit on the Board of Directors, vote, volunteer, work as an editor or write a letter to share opinions with the
university community. In addition to being a valuable source of information, The Peak provides employment and experience for Simon Fraser University students, maintains an archive, computer lab and website. The Peak is a member of the Canadian University Press.

Peer Programs

G300 Maggie Benston Student Services Centre, 778.782.4678 Tel, 778.782.5988 Fax, http://students.sfu.ca/peerprograms,
student_leadership@sfu.ca

Peer educators are student volunteers who provide support and assistance to students on a variety of issues including health, academic performance, career development and personal counselling. They receive professional training and work under staff supervision to meet with student clients, organize campus events and conduct educational workshops.

To become a peer educator, volunteer profiles and online application are available at http://students.sfu.ca/peerprograms. Recruitment occurs during the spring term. Training is provided in late August.

Public Affairs and Media Relations

2200 Strand Hall, 778.782.3210 Tel, 778.782.3039 Fax, www.sfu.ca/mediaplay

Public Affairs and Media Relations provides media relations and information dissemination. We publicize campus events and achievements, offer media liaison, publish Simon Fraser University News and maintain information on the University’s website. News and story ideas are always welcome.

Recreation & Athletics


Recreation & Athletics offers a variety of physical and social opportunities, from the recreation level to the athletic level. Our facilities include grass and artificial turf fields, softball diamond, eight lane 400 meter synthetic track, tennis courts, fitness centre, high performance weight training centre, six lane 25 yard swimming pool and diving tank, three multi-court gymnasiums, locker rooms, saunas, and a physiotherapy clinic. Use of these facilities are free to all enrolled Simon Fraser University students upon activation of their recreation membership. This membership can be activated by visiting the Recreation & Athletics general office in the Lorne Davies Complex. Office hours are Monday to Friday, 8:30 am – 4 pm.

Recreation Programming

Our recreation program strives to meet the needs of the university community. For a catalogue of options, visit www.sfu.ca/recreation.

Clan Athletics

Since its inception in 1965, Clan athletics has established a high performance athletics tradition. The program is perhaps best epitomized by its six consecutive United States Sports Academy Director's Cups, which are awarded annually to the top athletic program within the National Association of Intercollegiate Athletics (NAIA), and by its more than 80 alumni who have represented Canada at the Olympic Games, and the 100 alumni who have competed in the Canadian Football League. Our Clan standard-bearers are Canadian hero Terry Fox, Rhodes Scholar Natasha DeSouza, Olympic gold medalist Daniel Iagi, and the 2002 National Champion women's basketball Clan which won all available awards and had a perfect season of 35 victories and no defeats.

SFU has chosen to compete in both the US-based NAIA and Canadian Inter-university Sport (CIS) to provide its high performance student athletes with the right competition for them. Our varsity sports include: men's and women's basketball, men's and women's cross-country and track, field, men's football, men's and women's soccer, women's softball, men's and women's swimming and diving, women's volleyball, and men's and women's wrestling.

The student recreation and athletic fee provides free admission to all Simon Fraser University Athletics regular season competitions. For more information about our Clan athletics programs and competition schedule, visit www.sfu.ca/athletics.

Residence and Housing Office

On-campus housing for traditional residences, studios, townhouses, apartments: Residence Administration Building, 778.782.4201 Tel, 778.782.5903 Fax, http://students.sfu.ca/residences/

Residences and Facilities

Residences are assigned based on age and academic standing. Recently graduated secondary school students are generally assigned to those buildings which have required meal plans. Students who have previously lived in residence or who are college transfers may request living arrangements in Shell House or McTaggart-Cowan Hall. Townhouses are for upper division and mature students.

There are several residences on campus:

- Towers co-ed residences with required meal plans accommodate 737 students
- Shell House, a traditional* co-ed residence, accommodates 130 students
- McTaggart-Cowan Hall, a traditional* co-ed residence, accommodates 200 students.
- Hamilton Hall, a co-ed residence, accommodates 104 graduate students in single, fully furnished studio suites
- A townhouse complex accommodates 396 single students in four bedroom, fully furnished townhouses
- Louis Riel House, a family apartment building of 210 one and two bedroom units, is furnished with a stove and refrigerator in each unit. Apartments are reserved for couples, families with children, and single parent families.

*In single student residences, accommodations are fully furnished and are equipped with refrigerators.

An academic application to the University is not an offer of residence. An academic application to the University is not an application for residence. Also, academic acceptance from the University is not an offer of residence.

Regulations

Every student entering a residence is required to sign a license agreement, which is renewable, based on the completion of residence and housing admittance and eligibility policy requirements.

Off Campus Housing

http://www.sfuoccfemunet.com/

This website contains a current listing of all types of student housing in the neighboring community. The service is free to students. Listings are not inspected. Landlords listing their accommodation are required to pay a per listing fee for a one month display.

SFU Bookstore

Burnaby campus store
Maggie Benston Student Services Centre, 778.782.3656 Tel, 778.782.3401 Fax, bookstore@sfu.ca, www.sfu.ca/bookstore, 9 am – 4:30 pm Monday to Thursday, 9:30 am – 4:30 pm Friday

Surrey campus store
Mezzanine, Simon Fraser University Surrey, 778.782.7537 Tel, www.sfu.ca/bookstore, 10 am – 3 pm Monday to Friday

Vancouver campus store
Harbour Centre Mall, Simon Fraser University, 555 West Hastings Street, Vancouver, BC, V6B 4N4, 778.782.5048 Tel, 778.782.5219 Fax, hcbooks@sfu.ca, www.sfu.ca/bookstore, 10 am – 6 pm Monday to Friday, 10 am – 5 pm Saturday

SFU Bookstore is a not-for-profit service to students. Owned by the University and operating on a break-even basis, the Bookstore works to provide the right book at the right time, and at the best possible price. The Bookstore has virtually every required text at least two weeks before the start of classes.

Course books are available at their respective campuses — the Burnaby campus store carries course books for the Burnaby campus and Distance Education courses; the Vancouver store has course books for Vancouver campus courses; the Surrey campus store carries course books for Surrey campus courses. Enrolled students can use the Bookstore eservice to review required course books with the option to purchase on line.

A large selection of Simon Fraser University insignia merchandise is available. The Burnaby campus store has a full selection of Simon Fraser University clothing and giftware; the Surrey and Vancouver stores have a smaller variety. All three stores offer an assortment of stationary, general giftware, magazines and confectionary.

The Bookstore carries an extensive range of books by Simon Fraser University authors. While each store is unique, all have a selection of general books that cover a variety of subjects and focus on the specific interests of customers at each campus.

SFU Campus Security

Patrol Operations/Information Centre
01 Transportation Centre, 778.782.3100 (24 hours), 778.782.3469 Fax, security@sfu.ca, www.sfu.ca/security
General Office
1300 Transportation Centre, 778.782.5983 Fax, 778.782.5450 personal security

Parking Services
3110 West Mall Centre, parking@sfu.ca, 778.782.5534 Tel, 778.782.5386 Fax, 778.782.4577 information telephone line

All parking lots on campus, with the exception of visitor parking, are reserved for valid permit holders. Those without valid permits, including Burnaby campus visitors, park in one of the five designated visitor parking lots (rates subject to change).

<table>
<thead>
<tr>
<th>Parking Lot</th>
<th>Price per term</th>
<th>Eligible for</th>
</tr>
</thead>
<tbody>
<tr>
<td>B search lot</td>
<td>$128.00</td>
<td>undergraduate and graduate students, faculty and staff</td>
</tr>
<tr>
<td>Convocation Mall and West Mall reserved parking space</td>
<td>$352.00</td>
<td>undergraduate and graduate students, faculty and staff</td>
</tr>
<tr>
<td>visitor parking</td>
<td>$2.25 per hour, $10.75 per day</td>
<td>undergraduate and graduate students, faculty, staff and visitors</td>
</tr>
</tbody>
</table>

Undergraduate students may purchase a permit for B lot, Convocation Mall or West Mall as follows:

- B Lot (search lot)
  - Parking Lottery
  B lot parking permits are available through the parking lottery held prior to the fall and spring terms. Available spaces are allocated at random to students who enter the lottery. Students may enter the lottery through the Parking Services website at www.sfu.ca/security/Parking, or in person at the Parking Services office. You must have a Simon Fraser University student number to enter, as well as a current Simon Fraser University e-mail account.
  
- Open Sale
  An open sale is held on April 23. Open sale permits are based on availability and sold first-come, first-served.

Convocation Mall and West Mall (reserved space)
Undergraduate students may also purchase a permit for the Convocation and West Mall reserved parking lots, when available. If available, permits are purchased through an open sale, which is held approximately two weeks prior to the beginning of each term. Please visit the Parking Services website for a schedule of open sale dates.

Once these permits are issued, they must be renewed each term to maintain status.

For more detailed information, visit the Parking Services website at www.sfu.ca/security/Parking.

SFU Career Services
0300 Maggie Benston Student Services Centre, 778.782.3106 Tel, www.sfu.ca/career services, career_services@sfu.ca

Make your transition from Simon Fraser University to the workforce with our multidisciplinary team of career advisors and peer educators. These professionals are who support students and recent graduates through this transition with free one-on-one career sessions, on-line resources, mock interviews, and workshops.

Drop by MBC 0300 to review our extensive career services resource library to ‘kick start’ your career.

SFU Childcare Society
Children’s Centre, west side of Burnaby campus; Verdant, UniverCity; 778.782.4569 Tel, 778.782.3058 Fax, www.sfu.ca/childcare-society

SFU Childcare Society has 13 quality childcare programs for children of students, staff and faculty. Our unique world-class facility provides full and part-time care to over 260 children aged three months to 11 years. Currently the Verdant program operates at UniverCity on the east side of campus for under three year olds. School aged children are transported off campus to attend a local Burnaby school. All childcare staff are fully qualified, early childhood educators, and provide a caring, enriched, developmentally balanced program. Parent participation at the program and board levels is an important part of our operations.

Fees are payable monthly. Childcare bursaries are available to eligible students and staff. The Ministry for Children and Families also subsidizes childcare fees for those parents qualifying under their financial need criteria. For information and/or a visit, call the Childcare office, 8 am – 5 pm Monday to Friday.

SFU Community Trust
Suite 150 – 8960 University High Street, 778.782.3220 Tel, 778.782.3189 Fax, www.univercity.ca

The SFU Community Trust is responsible for the planning and development of UniverCity, a new community on approximately 200 acres within the University's Ring Road. UniverCity is a complete community that includes new housing, retail and commercial space, parks and recreational space. The first residents and businesses have now moved into the Highlands Neighbourhood, the first neighbourhood within the larger community. Visit our website or our office for more information.

SFU International
1200 Maggie Benston Student Services Centre, 778.782.4323 Tel, 778.782.5880 Fax, sfu_international@sfu.ca, www.sfu.ca/international

SFU International is the central unit responsible for co-ordinating Simon Fraser University’s international activities.

International and Exchange Students
SFU International should be the first stop on campus after moving into accommodation for international students. We offer programs and services such as:

- orientation programming for all new international and exchange students
- non-academic advising concerning student visas, employment regulations, and academic and cultural transition issues
- assistance for exchange students with course registration
- information about health insurance
- a student mentor program to support personal and cultural transition
- workshops and social events to enhance the university experience
- referrals to other services and resources both on and off campus

All international and exchange students, visiting scholars, faculty, and their families are encouraged to contact us. For more information about resources that are available to international students, please visit www.sfu.ca/international.

Study Abroad
International Exchange Programs
Third and fourth year students have access to unique educational opportunities through a student exchange. With planning, courses may be used toward a Simon Fraser University degree, and need not extend the period of study. Simon Fraser University has exchange relationships in many countries around the world and in Canada.

Students may, with the approval of his/her major department(s), undertake a maximum of 30 lower or upper division exchange credit hours while participating in the program. Students who have transferred to Simon Fraser University may count the 30 exchange credit hours in addition to any transfer credit the student may have been previously awarded.

Formal exchange program students may receive exchange credit for courses completed at the host university with a passing grade. Exchange program transfer credit should be arranged before departure.

See "Undergraduate Fees" on page 38 for information about international program fees.

Eligibility for Undergraduate Exchanges
Participants on all exchanges must meet certain academic, and residency requirements. All domestic and international exchange participants must

- have completed 36 credit hours prior to application with a minimum of 12 credit hours completed at Simon Fraser University prior to application
- have been approved in a program specialization (for example, a major or minor)
- have achieved a minimum 2.67 grade point average in the last two terms (minimum 24 credit hours)
- be entering their third or fourth year at the commencement of the exchange program
- be a full time student during the exchange period

Business Administration students completing a major and attending a Business-only exchange must have a minimum 3.0 CGPA. Visit http://www.sfu.ca/current-students/student-resources/exchange for a list of these partner institutions.

Field Schools
A field school is a full term program led by a Simon Fraser University faculty member for seven to 12 weeks in the field and some course work at Simon Fraser University prior to departure. A field school participant can earn nine to 12 Simon Fraser University credit hours towards their degree and grade point average. All applicants must

- be 19 years if age or older as of the day of departure
- have completed 30 credit hours prior to application
- have a minimum 2.5 grade point average

Additional requirements may apply for each field school.

For a complete list of exchange and field school destinations, information sessions, deadlines and application information, please visit www.sfu.ca/international.

Independent Study Abroad
Simon Fraser University students may study and receive Simon Fraser University credit at institutions which do not have a formal exchange agreement with the University. Students arrange this individually, and must also organize transfer credit using a Letter of Permission. Finance, tuition, academic and language requirements of the host institution must be met. Contact the host university regarding application and admission requirements. Information regarding the process for a Simon Fraser University Letter of...
**Dual Degree Programs**

A unique dual degree program is offered by Simon Fraser University and Zhejiang University (ZU) in China. Participating students obtain a degree in computing science from both universities. See “Simon Fraser University – Zhejiang University Dual Degree Program” on page 115 for more information.

Other dual degree programs are being developed. Additional information can be found at www.sfu.ca/international.

### Student Activity Fee

<table>
<thead>
<tr>
<th>Category</th>
<th>Full Time</th>
<th>Part Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee</td>
<td>$61.39</td>
<td>$31.09</td>
</tr>
<tr>
<td>Simon Fraser Student Society membership fee**</td>
<td>$25.35</td>
<td>$12.68</td>
</tr>
<tr>
<td>Student Society Building Fund/Capital Levy</td>
<td>$15.00</td>
<td>$7.50</td>
</tr>
<tr>
<td>Canadian Federation of Students provincial membership fee*</td>
<td>$3.82</td>
<td>$1.91</td>
</tr>
<tr>
<td>Canadian Federation of Students national membership fee*</td>
<td>$3.82</td>
<td>$1.91</td>
</tr>
<tr>
<td>Simon Fraser Public Interest Research Group</td>
<td>$3.00</td>
<td>$1.50</td>
</tr>
<tr>
<td>Peak Publication Society</td>
<td>$4.90</td>
<td>$2.45</td>
</tr>
<tr>
<td>CJSF — Campus Community Radio Society</td>
<td>$3.00</td>
<td>$1.50</td>
</tr>
<tr>
<td>Student Refugee — WUSC**</td>
<td>$1.00</td>
<td>$0.50</td>
</tr>
<tr>
<td>First Nations Student Association</td>
<td>$0.75</td>
<td>$0.38</td>
</tr>
<tr>
<td>Accessibility Fund</td>
<td>$0.75</td>
<td>$0.38</td>
</tr>
<tr>
<td>Universal-Transit Pass</td>
<td>$98.00</td>
<td>$98.00</td>
</tr>
</tbody>
</table>

* fee adjusted annually based on the Consumer Price Index
** fee increased via student referendum March 2006

### Student Learning Commons

The Student Learning Commons assists with academic writing, learning strategies, library research, computer technology, English language skills, thesis formatting, and more. SLC services include workshops, appointments, drop-in assistance, in-class presentations and online resources. In Burnaby, the SLC is located on the main floor of the Bennett Library. The Yosef Wosk SLC at Simon Fraser University Surrey is located in room 3695 on the Bennett Library. The Yo...
Simon Fraser University Surrey

Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 778.782.7400 Tel, 778.782.7448 Fax, www.surrey.sfu.ca, surrey@sfu.ca

Executive Director
J. Curry BComm (Manit) MBA (S Fraser)

Facilities and Services
In September 2006, Simon Fraser University opened its expanded permanent Surrey campus. The new facility is located in Central City, an award winning architectural complex designed by architect Bing Thom, who received an honorary degree from Simon Fraser University in 2005. The campus offers 322,000 square feet of classrooms, teaching and research laboratories, library facilities, and offices for faculty and administrative staff.

Amenities
The campus is located in a commercial area with many amenities — shopping, recreation, parks and restaurants — within easy walking distance. All three of Simon Fraser University’s campuses are linked by SkyTrain.

Academic Computing Services
778.782.7490 Tel, 778.782.7488 Fax, help-surrey@sfu.ca, www.surrey.sfu.ca/acis

Academic Computing Services (ACS) and Operations & Technical Support (OTS) provide and maintain the computing and audio visual infrastructure for Simon Fraser University Surrey. In support of the Surrey campus academic programs, ACS manages the distributed computing facilities including instructional classrooms, computer labs, studio labs, drop-in labs, the Library's InfoCommons, tutorial and seminar spaces, and the audio-visual production studios. In support of the staff, faculty and research community, ACS provides multi-platform microcomputer and workstation hardware and software support, printing, file store, audio-video set-up and support and consultation services. OTS provides the network (wired and wireless) and core services for the campus such as firewall, IP addressing, Active Directory domain servers, computer names, distributed file store, network time, and FTP. The Surrey campus is connected to the Vancouver and Burnaby campuses by dedicated fibre-optic cable.

SFU Bookstore
778.782.7537 Tel, srybooks@sfu.ca, www.sfu.ca/bookstore, Monday to Friday, 10 am – 3 pm

The Bookstore at Simon Fraser University Surrey carries course books for all classes offered at the Surrey campus. The Bookstore also offers an assortment of Insignia clothing/giftware, stationery, general books, magazines and confectionary.

Student and Registrar Services
778.782.7400 Tel, 778.782.7403 Fax, stserv@sfu.ca, http://students.surrey.sfu.ca, Monday to Friday, 9 am – 4:30 pm

Registrar and Information Services provides:
- official transcripts
- verification of enrollment
- tuition fee payments and admission deposits
- processing of some financial assistance documents
- Simon Fraser University Surrey photo ID/Library card and U-pass production
- appointment bookings for academic advising

To view other resources available to Surrey campus students, please visit http://students.surrey.sfu.ca

Student Development and Programming Centre
778.782.7407 Tel, 778.782.7403 Fax, studentlife-surrey@sfu.ca, www.sfu.ca/studentlife/surrey

This centre provides support for new students transitioning to Simon Fraser University Surrey through orientation and mentorship programs. It works with current students who lead student groups and clubs, and organizes campus spirit-building events. The full-time student life co-ordinator also promotes volunteering and the campus community through the Student Ambassador Program.

Enrollment and Recruitment Services (Surrey Campus)
778.782.7400 Tel, 778.782.7403 Fax, uggrad-surrey@sfu.ca, www.surrey.sfu.ca/students

Enrollment and Recruitment Services provide prospective students, parents, teachers, counsellors, advisors and the general public with information about the people, programs, and services available at Simon Fraser University and the Surrey campus. Prospective student advisors provide detailed guidance on University entrance and admission, and also co-ordinate outreach activities such as campus tours, information sessions, shadow days, open houses, and presentations for a broad range of audiences. Online resources for prospective students are available at www.surrey.sfu.ca/p_students.

Yosef Wosk Student Learning Commons at Surrey
Room 3695, 778.782.7614 Tel, 778.782.7420 Fax, http://learningcommons.sfu.ca

The Yosef Wosk Student Learning Commons is an academic learning centre providing friendly and knowledgeable assistance with a wide range of academic topics and skills including writing and learning skills support, peer tutoring, math drop-in and more. Our goal is to provide students with the strategies and tools needed for academic success.

Learning and Instruction Development Centre
778.782.7591 Tel, 778.782.7448 Fax, www.lidc.sfu.ca/about

The Learning and Instructional Development Centre (LIDC) was established in 2001 to provide pedagogical, media and technical support. Its original mandate included media production, audio-visual and technical services that historically were provided by the Instructional Media Centre (IMC). In November 2004, the eLearning Innovation Centre (eLINC) was amalgamated into LIDC. In May 2005, the Centre for Writing Intensive Learning (CWIL) also became part of LIDC. In August 2005, eLINC became known as the Educational Support and Innovation (ESI) unit, further reflecting its part in LIDC. With these changes, LIDC encompasses new curricular initiatives.

Simon Fraser University requires pedagogical and technical support to all three campuses. While the University has renewed its innovation and excellence in teaching and learning, the reconfigured LIDC has developed a new vision and direction.

Research
Research faculty from the Faculties of Arts and Social Sciences, Business Administration, and Education, and the Schools of Computing Science and Interactive Arts and Technology, and the Department of Mathematics are located at Simon Fraser University Surrey. Leading-edge research, often in collaboration with national and international partners, is being conducted in a variety of areas, including:
- bioinformatics
- computer-based games
- computer graphics
- computer networks and multimedia
- digital audio signal processing
- eBusiness
- education policy
- operations research
- digital entertainment
- design processes
- learning technologies
- politics of care
- student and faculty experiences of higher education
- literary modernism
- community, economic and rural development
- regional development and planning
- sustainable communities

A resident technology manager in the University Industry Liaison Office facilitates the connection of Simon Fraser University’s researchers with companies and government organizations to conduct collaborative research.
In addition, certificate and non-credit executive programs and two new research centres: CMA Centre for Strategic Change and Global Asset and Wealth Management MBA. Performance Measurement and CIBC Centre for Corporate Governance and Risk Management.

Morris J. Wosk Centre for Dialogue
580 West Hastings Street, Vancouver V6B 5K3, 778.782.5800 Tel, 778.782.5818 Fax, dialogue@sfu.ca, www.sfu.ca/dialogue/

The Wosk Centre for Dialogue is a dedicated 42,000 square foot centre conference area available for use by university, business and community clients for a variety of meetings and events. It is also the site for specialized university programming associated with the Dialogue Group. Leaders and groups from all sectors use the facility to meet and discuss local, national and international issues.

The unique Asia Pacific Hall has in-the-round seating for 154 and complete video conferencing and translation facilities. Its name recognizes the federal government's support and honors Canada's Year of Asia Pacific. The restored heritage bank building was a gift from Allied Holdings, developer of the adjacent hotel, condominium and retail complex.

Segal Graduate School of Business
500 Granville Street, Vancouver, BC V6C 1W6
Graduate Business Programs: 778.782.5013
Events and Facilities: 778.782.7763

This is the home of Simon Fraser University Business graduate management programs and services. The building, formerly the Bank of Montreal western headquarters, was donated by chancellor emeritus Dr. Joseph Segal and his family. Located in the heart of the financial district, the newly-restored heritage building houses doctoral, masters, diploma, certificate and executive programs and two new research centres: CMA Centre for Strategic Change and Performance Measurement and CIBC Centre for Corporate Governance and Risk Management.

Degree and diploma programs offered include:
- Doctor of Philosophy
- Master of Business Administration
- Executive MBA
- Global Asset and Wealth Management MBA
- Management of Technology/Biotechnology MBA
- Master of Financial Risk Management (MA)
- Graduate Diploma in Business Administration

In addition, certificate and non-credit executive programs that are available include: Executive Management, Directors Education, CMA Executive, Health Management, Customized Management Education.

Student and Registrar Services
778.782.5000 Tel, 778.782.5060 Fax, 10 am – 7 pm Monday to Thursday, 10 am – 5 pm Friday, (reduced hours in effect during term breaks), www.vancouver.sfu.ca/misc/inforeg.html

Director
R.B. MacLeod BComm (MAII)

The office provides a wide range of services for all Simon Fraser University Vancouver students and prospective students including, but not limited to:
- information on all programs at Simon Fraser University Vancouver
- information on courses, programs and services at the Burnaby Mountain campus
- information on graduate programs
- academic advising
- assistance and information on admission to, and registration in, undergraduate and credit-free courses
- information on distance education courses and programs
- course changes
- fee payments

The Simon Fraser University catalogue of programs, courses and events as well as brochures describing individual programs are available at Information and Registration Services.

The catalogue is also available online at www.vancouver.sfu.ca/catalogue/.

Admission and Enrolment
Registration in undergraduate and graduate courses is a two step process. Students must first have been admitted to the University before they may choose the courses in which they wish to participate. Prospective applicants should note that admission to the University is competitive and that applications should be completed as early as possible. It is also important to note that consideration for admission is given for the University as a whole and is not specific to any campus. Therefore, students wishing to take undergraduate or graduate courses only at the Vancouver campus must meet all the admission requirements as approved by the University senate.

For further information about undergraduate or graduate entrance to Simon Fraser University please see the appropriate sections of this Calendar.

Those who are currently students of the University can select Vancouver courses through the usual course registration process. For detailed information on undergraduate course selection, please refer to the Registration section and for graduate information, please see the General Regulations, Graduate section.

Registration for and/or admission to most credit-free programs is on-going and continues until the program or course is full. Interested students should call Continuing Studies at 778.782.5100 for information about specific programs.

Samuel and Frances Belzberg Library
778.782.5050 Tel, 778.782.5052 Fax, 10 am – 9 pm Monday to Thursday, 10 am – 7 pm Friday, 10 am – 5 pm Saturday, and 10 am – 5 pm Sunday (September to April) (reduced hours are in effect during term breaks), www.vancouver.sfu.ca/belzberg/

Belzberg Library serves students, staff and faculty of Simon Fraser University Vancouver with a range of library services including reference assistance, loan of library material, access to course reserve items and requests for materials from the W.A.C. Bennett Library at the Burnaby campus, the Simon Fraser University Surrey library, and other academic libraries. On-line services form an essential element of this electronic library. A web-based catalogue, commercial and public databases, electronic journals, and access to library files on the campus network are all available. Quiet study space is provided in the library.

The library collection supports the courses and programs offered downtown. It consists of over 8,000 books and several hundred journal titles as well as microfilm and fiche collections. In addition, students have full access to the other Simon Fraser University libraries, including almost 2.5 million items and extensive online collections at the main Bennett Library in Burnaby.

Student Learning Commons services and support for students downtown are co-ordinated through Belzberg Library, http://learningscommons.sfu.ca. Library Cards: The student identification card serves as library card; it is issued to Vancouver campus students enrolled in credit courses by Information and Registration Services. Students in credit-free courses at the Vancouver campus may request a library card from the Belzberg Library. Cards for external users are available for an annual fee.

Textbooks: All downtown credit and credit-free course textbooks are sold from a branch of the SFU Bookstore located at Simon Fraser University Vancouver.

Academic Computing Services
Royal Bank Instructional Computing Facility
778.782.5030 Tel, 10 am – 10 pm Monday to Thursday, 10 am – 7 pm Friday, 10 am – 12 noon, 1 pm – 5 pm weekends,
www.vancouver.sfu.ca/ecs/labs.htm

Senior Systems Consultant
M. Jutras

The Royal Bank Instructional Computing Facility at Simon Fraser University Vancouver has five well-equipped teaching labs and a drop-in centre that may be used by Simon Fraser University students, faculty and staff in support of the academic and professional development programs offered at the downtown campus. When the teaching labs are not being used for scheduled classes or tutorials they are available for drop-in use. All users must be part of the University community and are required to have a valid Simon Fraser University computing account (e-mail account) or an authorized provisional account.

IBM Labs (North and South): 17 machines, 7th floor lab: 31 machines. All are equipped with Dell Optiplex GX 820 3.2 GHz Pentium IV microcomputers for students with one machine connected to an overhead display for use by the instructor.

Mac Annex Lab: nine Apple eMac microcomputers with Mac OS X. One Epson Perfection 1640 SU flatbed scanner, an external floppy drive, and external 250 MB zip drive also available.
Himie Koshevoy Publishing Lab
Located on the second floor of Simon Fraser University Vancouver, this lab has 18 Power Mac G4 microcomputers with two page colour displays and CD-RW/DVD-ROM. One machine is connected to an overhead display for use by the instructor. One Epson Perfection 3200 photo flatbed scanner, an external floppy drive, and external 250 MB zip drive also available.

1340 Drop-in Centre: Equipped with six eMacs and 10 Dell machines with the same configuration as the other labs. This area may not be reserved. All labs are connected to a network server, standard, large format, and colour laser printer, as well as Unix and other campus network services.

Lectures, Exhibitions and Special Events
778.782.5100 Tel, cs_hc@sfu.ca
www.vancouver.sfu.ca/phea/
The campus community and the general public are invited to attend the many Vancouver campus public lectures and special events. Public events are free but seating is limited; reservations are recommended. Contact us to be added to the mailing list. For email notification, write to maillist@sfu.ca and enter <subscribe sfuvan-info> in the subject line.

Teck Gallery
778.782.4266 Tel, www.sfu.ca/gallery
The Teck Gallery is located on the ground floor of Simon Fraser University Vancouver, and is open during regular campus hours. The exhibitions at the Teck Gallery generally deal with art that addresses social an environmental concerns. The Simon Fraser University Gallery located on the Burnaby campus is responsible for programming at the Teck, as well as overseeing the many artworks from the permanent collection that are displayed in the public spaces and offices at Simon Fraser University Vancouver.

Action Canada Fellowship Program
778.782.7961 Tel, actioncanada@sfu.ca,
www.actioncanada.ca
Action Canada, a national fellowship program affiliated with the Morris J. Wosk Centre for Dialogue, is housed at Simon Fraser University Vancouver. Each year up to 20 young Canadian leaders are selected for a program of leadership development and public policy study.

Undergraduate and Graduate Programs
Simon Fraser University offers graduate and undergraduate programs as well as professional development programs at the Vancouver campus.
Browse the academic departments sections for information.
The Undergraduate Semester in Dialogue is a full-time, one term program (see page 238). Additional undergraduate courses are also offered on a regular basis in business administration, international communication and other disciplines. For current offerings telephone 778.782.5000.

Graduate programs offered include: master of arts in gerontology, master of arts in liberal studies, master of business administration in several disciplines (see www.sfubusiness.ca/mba for details), master of international leadership, master of public policy, master of publishing, master of urban studies and a doctorate in educational leadership. Other programs are under development.

Continuing Studies
778.782.5100 Tel, 778.782.5098 Fax, www.sfu.ca/cstudies
Dean
J. LaBrie BS (Maine), MSA (St Michael’s, VT), EdD (Penn)
Continuing Studies’ hallmark is the leadership role it plays in creating bridges between the University and the community. In many ways, Continuing Studies acts as a front porch for the University because its programs introduce many adult, online and non-traditional learners to a university environment. Simon Fraser University offers graduate degrees, undergraduate and degree completion programs, and selected certificate programs at its Vancouver campus. It also offers specialized short courses, seminars, workshops and conferences developed from University and community resources.
Participants in the latter category are not required to be formally admitted to the University, although some programs have their own admission requirements. As a rule, there are no examinations and no university credit is awarded. In every other way these programs meet the high standards of university level instruction. The University awards certificates for selected credit-free programs that have been approved by senate and meet specific criteria, including a minimum of 120 contact hours and formal evaluation.
Programs are held during the day, evening and on weekends. They are taught by faculty from the University, business, the arts and the professions.
For detailed information, or to enquire about in-house programs which can be developed for companies and organizations, see the Continuing Studies section, or call Continuing Studies at 778.782.5100.

Research Institutes
The following institutes and centres are based at the Vancouver campus. Consult the Calendar index (see “Index” on page 490) to locate further details about these organizations.
• Canadian Centre for Studies in Publishing
• Centre for Applied Research in Mental Health and Addiction
• Centre for Education, Law and Society
• Centre for Policy Research on Science and Technology
• Centre for Public Policy Research
• Centre for Research on Violence Against Women and Children
• Centre for Sustainable Community Development
• Children’s Health Policy Centre
• CIBC Centre for Corporate Governance and Risk Management
• CMA Centre for Strategic Change and Performance
• Dialogue Centre
• Gerontology Research Centre
• Institute for Critical Studies in Gender and Health
• Institute for the Humanities
• David See-Chai Lam Centre for International Communication
• Geraldine and Tong Louie Human Performance Centre
• Pacific Institute for the Mathematical Sciences
• W.J. VanDusen BC Business Studies Institute
• 7th Floor Media

TIME Centre
778.782.7970 Tel, www.sfu.time.com
The Technology, Innovation, Management and Entrepreneurship (TIME) Centre is a Simon Fraser University initiative to support technological enterprise in BC. It houses Poly Lab, 7th Floor Media, TIME Business Centre and TIME Ventures Incubator.

Services
Health and Counselling Centre
300 Simon Fraser University Vancouver,
778.782.5200 Tel, www.sfu.ca/hccc
The Vancouver campus’ medical clinic is open Tuesday to Friday, 10 am to 5:30 pm (subject to change).
Physicians provide a full range of medical care for students, faculty and staff. Referrals are made for diagnostic tests, special health problems and surgical procedures. A counsellor is available, for students only, on Tuesdays and Wednesdays. All files are maintained in the strictest confidence. Drop in, or make an appointment.

Meeting, Event and Conference Services
1.866.619.6338 Tel, 778.782.5060 Fax
Simon Fraser University Vancouver is the ideal venue for conferences, meetings, seminars and special events, offering superb facilities and catering, innovative programming and professional event management in three heritage buildings.
Simon Fraser University, Harbour Centre, 515 West Hastings Street
Segal Graduate School of Business, 500 Granville Street
Morris J. Wosk Centre for Dialogue, 580 West Hastings Street

SFU Bookstore
Harbour Centre Mall, 778.782.5048 Tel,
778.782.5219 Fax, www.sfu.ca/bookstore,
hcbooks@sfu.ca
Hours are Monday to Friday 10 am – 6 pm, and Saturday 10 am – 5 pm.
The Bookstore at Simon Fraser University Vancouver carries course books for all classes offered at the Vancouver campus. The Bookstore also offers a broad range of general books and general giftware along with an assortment of insignia clothing/giftware, stationery, greeting cards, magazines and confectionary.
Centres and Institutes

Centre for Research on Adaptive Behaviour in Economics (CRABE)
Director: J. Arifovic BA (Sarajevo), MA, PhD (Chic), 778.782.5603 Tel, 778.782.5944 Fax, arifovic@sfu.ca, www.sfu.ca/crabe
The centre’s activities and program are intended to initiate and promote research related to experimental and behavioural economics, and computational methods of the study of learning, adaptation and evolution in economic environments. The centre will facilitate the conduct of faculty and student research projects by providing infrastructure for computer simulations, economic experiments with human subjects and survey studies. The centre will also organize conferences, colloquia, visiting speakers’ seminar series, and visiting scholar programs.

Western Canadian Universities Marine Sciences Society (Bamfield)
Director: (to be appointed), 250.728.3301 Tel, 250.728.3452 Fax, spakula@bms.bc.ca, www.bms.bc.ca
This society was founded in 1969 with the objective of operating a major research and teaching facility in coastal and marine sciences. The Bamfield Marine Sciences Centre offers year round research facilities that enable resident and visiting scientists and students (MSc and PhD) to develop a range of research programs. Courses that lead to academic credit for undergraduate and graduate degree programs at member universities are given at the station. The centre also runs a public education program from September through April.

BC Synchrotron Institute
Director: K.L. Kavanagh BSc (Qu), PhD (Cornell), 778.782.5714 Tel, 778.782.3765 Fax, kavanagh@sfu.ca
The institute’s members come from the University of BC, University of Victoria, Simon Fraser University, and University of Northern BC, BC companies, federal and provincial government laboratories in BC. The mandate is to inform the BC academic, industrial and government laboratory communities of opportunities through synchrotron radiation studies, particularly at the Canadian Light Source; to raise BC’s profile nationally in research and development; and to assist in preparing BC funding applications for facilities and equipment from agencies such as CFI.

Behavioural and Cognitive Neuroscience Institute
Interim Director: D. Weeks BA (Windsor), MSc (McM), PhD (Auburn), 778.782.3358 Tel, 778.782.3427 Fax, dweeks@sfu.ca
This institute fosters interdisciplinary research and scholarship concerning the relationship between mind and brain. Building on the strengths of scholarship concerning the relationship between mind and brain, the BCNI focuses on a broad range of topics. Our major emphases are on attention, perception, action and language. Some of the main objectives of the centre are to
- understand the relationships between cognitive functions and their neurobiological substrates
- understand the life-long developmental plasticity of brain and behavior

• understand the nature of the deficits and spared capacities that are specific to particular syndromes and developmental disorders
• develop new measures that can be used in clinical treatment
• co-ordinate initiatives to secure world-class neuroscience research tools and facilities for Simon Fraser University
The institute provides a matrix within which scientists work synergistically toward these and related goals.

Behavioural Ecology Research Group
Director: L.M. Dill BSc; MSc, PhD (Br Col), 778.782.3664 Tel, ldill@sfu.ca, www.sfu.ca/biology/berg
The research group was formally established in 1989 to pursue basic research in behavioral ecology; to maintain and develop an internationally recognized student training centre in behavioral ecology, and related areas of inquiry; and to provide a service to government, industry and others to tackle basic and applied problems in behavioral ecology through collaborative research. Members are drawn from the Departments of Biological Sciences, Psychology, and the School of Resource Management.

Bill Reid Centre for Northwest Coast Art Studies
Director: G. Macdonald BA (Tor), PhD (Yale), LLD (Calg), OC, 604.682.3455, 604.682.3310, gmacdonald@billreidfoundation.org, www.billreidfoundation.org
The objective of the centre is to promote the understanding of the history and principles of Northwest Coast Indigenous art through research and connoisseurship, and to promote its application to contemporary art and design in British Columbia with special reference to the interests of Indigenous Peoples. The centre will provide a meeting place for students and scholars of diverse backgrounds, and serve as a virtual access portal for Native community centres, museums and academic departments around the world.

W.J. VanDusen BC Business Studies Institute
Director: C.F. Smart BCom, MBA, PhD (Br Col), 778.782.3640 Tel, 778.782.5833 Fax, smart@sfu.ca, www.sfubusiness.ca/research
This institute was established to focus research efforts on issues of particular relevance to corporations and government agencies in BC. The institute brings the expertise and research acumen of the Faculty of Business Administration to the Simon Fraser University Vancouver campus, where faculty and business executives have greater and more direct opportunities to work together. The institute sponsors lectures and has an executive-in-residence program to bring business leaders into the classroom.

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Canadian Centre for Studies in Publishing
Director: R.M. Lorimer BA, MA (Manit), PhD (Tor), 778.782.5242 Tel, 778.782.5239 Fax, ccpp-info@sfu.ca, www.ccpp.sfu.ca
This centre was established in 1987 to pursue the study of publishing and to serve the research and the information needs of the publishing industry. The CCSP engages in basic research into the history, management, technology and policy issues related to the industry. Projects are initiated by the CCSP and undertaken under contract to, or by means of grants from industry, government and granting agencies. The research of the CCSP involves faculty, graduate students and independent researchers from a variety of disciplines and includes seminars, conferences and professional development courses. Supported by private funds, CCSP Press was established in 2005 to publish scholarly, educational and trade titles of relevance to the publishing industry.

Institute for Canadian Urban Research Studies
Director: P.L. Brantingham AB (Col), MA (Fordham), MSP, PhD (Florida State), 778.782.3515 Tel, 778.782.4140 Fax, pbbranting@sfu.ca
The institute is intended to further multidisciplinary research on urban issues. More specifically its objectives are to: provide a focus for research about urban problems and issues in Canada; promote interdisciplinary collaboration and research; provide an institutional focus for international scholarship concerned with urban problems; provide a facility in which data for the study of urban problems can be collected, catalogued, and made readily accessible through modern data management; provide a facility in which research and technical personnel from different management agencies such as government and public advocacy groups concerned with urban problems can work together and complement the vision of the Faculty of Health Sciences to integrate research and policy for public and population health locally, nationally and globally.

Centre d’études Francophones Québec-Pacifique
Director: G. Poirier BA (Laval), MA, PhD (McG), poirier@uwaterloo.ca, http://french.uwaterloo.ca/~poirier/cefqep_files/Centre.html
The centre is a research and documentation centre. Its mandate includes gathering and disseminating information relating to French literatures, cultures and languages of the Pacific region, as well as interdisciplinary research in literature, sociolinguistics, cinema and culture. It supports and sponsors conferences, colloquia and visiting speakers. As the only research centre of its kind west of the Rockies, it’s activities and programs focus on the distinct culture of French speakers of BC and the Pacific Rim. In addition, the centre acts as a liaison between the Centre d’études Québécoises (CETUQ) of the University of Montreal and the Pacific Region.

Chemical Ecology Research Group (CERG)
Director: E. Plettner BSc, PhD (S Fraser), 778.782.5868 Tel, 778.782.3765 Fax, plettner@sfu.ca, www.sfu.ca/chemistry/CERG
This association of research groups, established in 1981 as a regional graduate and post graduate training centre in chemical ecology, offers a service to government and industry; to isolate, identify and synthesize semiochemicals; to clone, express and study enzymes involved in the perception and biosynthesis of semiochemicals; to study interactions between organisms mediated by semiochemicals; and to develop practical applications of semiochemicals.

Children’s Health Policy Centre
Director: C. Waddell BSc, MSc (Br Col), MD (McM), 778.782.7775 Tel, 778.782.7777 Fax, chpcom@sfu.ca, www.childhealthpolicy.sfu.ca
Located in the Faculty of Health Sciences at Simon Fraser University, we are an interdisciplinary research group dedicated to integrating research and policy to improve children’s health. We primarily focus on children’s social and emotional development, or children’s mental health, as one of the most important investments that any society can make.

We conduct research on the policy process and research relevant to inform policy-making: addressing determinants of health; preventing problems in children at risk; promoting effective programs and services; and monitoring our collective progress towards improving the lives of all children. Reciprocal relationships with government and community groups in turn inform our research.

We provide education in health policy, children’s mental health and population health. As well, we provide service: to the research community in the form of consultation on the policy process; and to the wider community in the form of consultation to government and public advocacy groups concerned with children’s health. Our work supports and complements the vision of the Faculty of Health Sciences to integrate research and policy for public and population health locally, nationally and globally.

CIBC Centre for Corporate Governance and Risk Management
Director: D. Shapiro, BA (Calg), MA, PhD (Cornell), 778.782.5155 Tel, 778.782.5122 Fax, dshapiro@sfu.ca, www.sfbusiness.ca/cibccentre
The centre will provide leading-edge research capability in corporate governance and risk management. It will focus on the nature and effects of good corporate governance, and the relationship between corporate governance and strategic, financial, technical, ethical and social risk. It will disseminate research results in academic journals, to relevant stakeholders through seminars, conferences and the internet. It will develop leading-edge programs and colloquia in corporate governance and risk management, in particular as they relate to boards of directors and small firms. The centre will also have an international focus, and will build strong national and international relationships among stakeholders and other relevant centres.

CMA Centre for Strategic Change and Performance Measurement
Director: T.B. Lawrence, BComm, PhD (Alta), 604. 291.5154 Tel, Fax, 778.782.5153, tom_lawrence@sfu.ca, www.sfbusiness.ca/cma-centre
The centre’s purpose is to promote research and knowledge dissemination about how organizations plan and execute strategic change, and how best to measure the performance of organizations undergoing such change. Funded by the Certified Management Accountants (CMA) of Canada, the centre will conduct research into three broad yet highly interrelated themes: strategic change and the execution of strategic change, appropriate measurements for the evaluation of the performance of such changes, the evolution of organizations undergoing rapid change.

Centre for Coastal Studies
Director: P. Galagher BSc, BEd (Br Col), PhD (S Fraser), 778.782.4653 Tel, 778.782.3851 Fax, www.sfu.ca/coastalstudies
The centre promotes interdisciplinary research, education and dialogue on Canada’s coastal ecosystems, particularly in British Columbia. By linking social and natural science with local knowledge, the centre focuses on three key themes: marine conservation, diversification of coastal economies, and capacity for resource management. Activities include collaborative research involving universities, industry, communities, First Nations and governments; public education; programs and projects that enhance capacity building and information sharing. Its facilities are a venue for interdisciplinary networking and a location of meeting and office space for visiting researchers.

Centre for Comparative Study of Muslim Societies and Cultures
Director: D.N. Maclean BA (NY State), MA, PhD (McG), 778.782.4437 Tel, 778.782.5837, derryl_maclean@sfu.ca, www.sfu.ca/history/ccsmc
The centre facilitates the academic discussion and public understanding of the cultures and societies of Muslim peoples of the past and present. By focussing attention on the diversity of Muslims, the centre encourages the shift in analysis from that of a single religious ideoscape defined by Islam to a more complex view of Muslims and Muslims in the construction of their own history. It sponsors and supports conferences, workshops, public lectures, visiting scholars, international exchange, library augmentation, and language acquisition in the area of Muslim studies.

Centre for Sustainable Community Development
Director: M.L. Roseland, BA, MA (Wesleyan, Conn), PhD (Br Col), 2100 East Academic Annex, 778.782.5849 Tel, 778.782.5473 Fax, kedadmin@sfu.ca, www.sfu.ca/csccd
The Simon Fraser University Centre for Sustainable Community Development (CSCD) works to support and enable the sustainable development of communities through research, education, and community mobilization in BC, Canada and internationally.

The CSCD offers an undergraduate certificate and post-baccalaureate diploma (also delivered through distance education), graduate study, and a non-credit professional program.

The CSCD evolved from the Community Economic Development Centre, and offers credentials in CED. Community Economic Development (CED) is the process by which communities work together to initiate and generate their own solutions to their common economic problems. CED enterprises are based on a consideration of the relationship between economic factors and other community elements such as housing, education, the natural environment, health, and the arts. CED has emerged as an alternative to conventional approaches to economic development, a participatory, holistic process that leads to positive, concrete changes in communities by creating employment, reducing poverty, contributing to the health of the natural environment, stabilizing local economies, and increasing community control.

Co-operative Resource Management Institute
Director: A.S. Harestad BSc, MSc, PhD (Br Col), 778.782.4809 Tel, 778.782.8578 Fax, dallaway@sfu.ca, www.rem.sfu.ca/crmi
This institute is a unit on the Burnaby campus that houses personnel from natural resource management agencies. The Institute can facilitate solutions to difficult multidisciplinary issues in resource management by providing an environment where personnel from different management agencies such as forestry, fisheries, and wildlife can work side-by-side along with Simon Fraser University
faculty, graduate students, post-doctoral fellows, and research associates. The university benefits from greater concentration of expertise in resource management on campus and from new opportunities for multidisciplinary, collaborative research programs.

**International Centre for Criminal Law Reform and Criminal Justice Policy**
President: D.C. Préfontaine BA (Rochestur), LLB (Sask), LLM (Missouri), QC
Acting/Executive Director: K. Macdonald, 604.822.9875 Tel, 604.822.9317 Fax, icrclaw@law.ubc.ca, www.icrclaw.ubc.ca

This international centre was established in 1991 in Vancouver BC, by its founding charter members Simon Fraser University, the University of British Columbia and the International Society for the Reform of Criminal Law. The centre is formally affiliated with the United Nations and functions as one of two inter-regional UN affiliates of the United Nations Crime Prevention and Criminal Justice Program. The mandate of the centre is to promote human rights, the rule of law, democracy and good governance. To fulfil its mandate, the centre operates closely with other members of the United Nations Crime Prevention and Criminal Justice Network of Institutes, as well as federal and provincial governments.

**Institute for Studies in Criminal Justice Policy**
Director: M.A. Jackson BA (Calif), MA, PhD (Tor), 778.782.4040 Tel, 778.782.4140 Fax, margarej@sfu.ca

The institute was established with the initial support of the Donner Canadian Foundation in 1980. The purpose of the institute is to contribute to the examination of criminal justice policy by providing a setting in which academics, justice system personnel and members of the community can assemble to apply scholarly research to policy development and analysis. The institute undertakes projects on its own initiative as well as under contract.

**Criminology Research Centre**
Director: W.G. Glackman BA (Calif), MA, PhD (S Fraser), 778.782.5352/4041 Tel, 778.782.4140 Fax, crcc@sfu.ca, www.sfu.ca/crc

This centre, established in 1978, facilitates criminological research by faculty and graduate students. Funds to establish and maintain the centre were provided by the Government of Canada for the first 15 years of operation. Since then, grants and contracts obtained by School of Criminology faculty from provincial, federal and private sources have maintained this at a minimal level. Currently, the centre operates largely as an administrative unit for external funding received by faculty of the school. Funding to pay the salary of an administrator is derived from these sources and occasional grants from the Dean of Arts. In addition, a modest library is maintained for the use of the Simon Fraser University community. The centre is rejuvenating its occasional Paper series with the development of a website.

**Centre for Dialogue**
Director: R.S. Anderson BSc (Boston), PhD (Kansas), 778.782.7894 Tel, 778.782.7892 Fax, dialogue-info@sfu.ca, www.sfu.ca/dialouge

Established in March 2002, the centre promotes dialogue as a discipline and from one of two inter-regional UN affiliates of the United Nations Crime Prevention and Criminal Justice Program. The centre is guided by the Centre for Dialogue steering committee and currently chaired by Mark Winston, Director, Undergraduate Seminar in Dialogue; Fellow, Morris J. Wosk Centre for Dialogue; Professor, Dept. of Biological Sciences.

**Institute for Research on Early Education and Child Health (REACH)**
Director: M. Hoskyn BHE, MA (Br Col), PhD (Calif), 778.782.6956 Tel, 778.782.3203 Fax, reach@sfu.ca, www.educ.sfu.ca/reach

The Institute for Research on Early Education and Child Health (REACH) is a multidisciplinary research group at Simon Fraser University. The institute’s mission is to generate and share knowledge about child health and education that will advance humanity by enriching the lives of young children and their families. Current research projects focus on young children from infancy to eight years of age and the communities in which they live and grow. We also have a special interest in advancing knowledge about the interplay between biology and environmental experiences that influence child health, psychosocial development and learning. Through community outreach in real world settings, we strive to promote change that favors children in early education and public policy at local, national and international levels. At the Institute for Research on Early Education and Child Health (REACH), we believe that effective research focuses on the child and the child’s rights, advances theory, and defines the learning environments that promote child health and family well-being. An important aspect of this process is ongoing collaboration among researchers and the creation of partnerships with the families, health-care professionals, educators, administrators, advocacy groups, and policy makers who will potentially benefit from our research.

**The Centre for Education, Law and Society**
Acting Director (Sept 2006 – August 2007): K. Tooley BA, MEd (Alta), PhD (Tor), 778.782.4517 Tel, tooley@sfu.ca

Director: W. Cassidy BA, MEd (S Fraser), PhD (Chic), 778.782.4484/778.782.7840 Tel, 778.782.3203/778.782.7840 Fax, Cassidy@sfu.ca, www.educ.sfu.ca/cels, www.lawconnection.ca (the centre’s teaching arm)

The centre was established in 1984 and given formal approval by the board of governors in 1994. Its central purpose is to improve the legal literacy of children and young adults through a program of teaching, curriculum development and research, and community initiatives. Law-related education encompasses: an understanding of law, its role in society and impact on the individual; the relationship between law and governance/citizenship/democracy; issues relating to social justice and fundamental human rights; conflict and dispute resolution; school law, policies, procedures and culture.

CELS works primarily with teachers and prospective teachers, school administrators, and educational and legal organizations to help fulfill its mandate. Projects range in scope from the development of mock trials using multimedia in the classroom, to support for a school for high risk, court-referred youth, to research into school culture and social responsibility, to the development of holistic anti-violence programs for schools built on the ethics of care and justice, to the development of case studies on experimental law, to the formation of a website on law related issues. Projects vary from year to year, depending on the needs of the educational community, the centre’s priorities, and the ability to obtain external funding.

Three undergraduate courses and one graduate in law education have been developed and are offered on a regular basis through the Faculty of Education. The three undergraduate courses are available through distance education. The centre attracts a number of graduate students interested in issues related to school law, human rights, social justice, citizenship education, and school culture.

**Centre for Experimental and Constructive Mathematics**
Director: M.B. Monagan BSc (Massey), MMath, PhD (Wat), 778.782.5617/4279 Tel, 778.782.5614/4947 Fax, mmonagan@cecm.sfu.ca, www.cecm.sfu.ca

The centre furthers research and graduate education in the mathematical sciences. The centre’s activities may include: provision of post doctoral fellowships in areas related to experimental and constructive mathematics; sponsorship of regular short term and long term research visitors to the centre; organization of regular colloquia and occasional conferences on advances in experimental and constructive mathematics; participation in the training of graduate students in experimental and constructive mathematics; establishment, development and maintenance of access to software archives; provision of tutorial support for faculty and graduate students at Simon Fraser University in the use of symbolic languages, of the centre’s software, and of other high level mathematical tools; establishment of a related algorithmic consulting service for individuals within and without the University community; collaboration with similar centres and appropriate individuals at other Canadian and foreign universities. Such collaboration may include co-sponsorship of speakers, conferences and visitors, joint application for external research funds, exchange of software and expertise, establishment of a Canadian mathematical computation network.

Subject to the director’s approval, the centre’s membership will be open to Simon Fraser University faculty, post-doctoral and graduate students who are actively involved in mathematical computing. Associate membership will be available to faculty at other universities.

**Feminist Institute for Studies on Law and Society**
Co-directors: D.E. Chunn BA (Br Col), MA, PhD (Tor), 778.782.4761 Tel, W. Chan BA (Car), MA (Sheff), PhD (Cambi), 778.782.4469 Tel, fisl@sfu.ca

The institute was established in 1990 to facilitate and continue the development of feminist analyses on law and society at Simon Fraser University. It is designed to provide an environment for creative interaction among scholars and community representatives who are involved in its work locally, nationally and internationally, and to bridge gaps between legal and social science research.

**4D Labs**
Executive Director: R. Hill, BSc, PhD (WOn), FCIC, 778.782.8063 Tel, 778.782.3765 Fax, ross_hill@sfu.ca, www.4dlabs.ca

4D LABS was formed to foster fundamental university research in the areas of advanced materials and nano-scale devices. A multidisciplinary team of leading researchers will work to design, develop and demonstrate prototype devices that can lead to major advances in information and health technologies. 4D LABS integrates an international research team of chemists, physicists and engineers with expertise in nanomaterials engineering and devices. This team leads the transformation from traditional electronic information processing systems to new technology.
The Centre for Natural Hazards Research (CNHR) is a post baccalaureate diploma in gerontology, a minor in functional sold state materials, surface chemistry and fabrication methods, lithography, polymers, biomaterials, materials characterization, theological chemistry and physics.

Centre for Studies in Global Asset and Wealth Management
Director: (to be announced)
The centre, which was approved by the Board of Governors on January 25, 2007, will focus on two fundamental issues with respect to financial investing. First is to address the growing need to research and assess global financial markets. Affiliated with the school's Global Asset and Wealth Management MBA Program, this centre's mandate is to develop a better understanding of the ever-increasing array of global investment instruments and their suitability as client investment opportunities. The centre will complement the school's markets research and trading room, where faculty and students can use the latest technologies to access global stock exchanges and on-line financial databases to explore and evaluate the details of particular investment strategies.

Increasingly we see the creation of new asset classes, such as hedge funds and boutique investments. Evaluating these new instruments, posing new instruments, and maximizing investment alternatives will be central activities of this new centre.

Secondly, the centre will develop research expertise with respect to the development of investment policies to better guide advice that is given to investors. More and more investors have invested in a broad array of investment opportunities, many of which are truly global. Such investors must often deal with highly specialized issues such as complex taxation considerations, large accelerations of capital gains and multi-generational concerns, situations in which simple investment structures are clearly not sufficient. What is needed are investment policies that more appropriately reflect such individualistic situations, rather than policies reflected in current investment planning, focusing on an average, stereotypic investor wherein decisions come down to selecting a debt/equity mix and little else.

The centre will marshal the academic resources for undertaking such advanced research and analytical capabilities. These academic resources would include researchers affiliated with the centre, visiting research fellows, and an affiliated PhD stream, as well as inter-institutional research linkages.

Centre for Natural Hazards Research
Director: J.J. Clague, BA (Occidental), MSc (Calif), PhD (Br Col), PGeo, Canada Research Chair in Natural Hazards, 778.782.4924 Tel, 778.782.4198, Fax. jclague@sfu.ca, www.sfu.ca/cnhr

The Centre for Natural Hazards Research (CNHR) is an interdisciplinary and multi-departmental research facility within the Department of Earth Sciences at Simon Fraser University. CNHR conducts research on natural geophysical processes that pose a hazard to Canadians, including earthquakes, tsunamis, landslides, floods, and the impacts of climate change on the landscape and ecosystems. It is grounded in the physical sciences but conducts social and policy research on risk perception. CNHR provides graduate students with training and skills in a range of disciplines, electrophotography, fabrication methods, lithography, polymers, biomaterials, materials characterization, theological chemistry and physics.

Institute for Critical Studies in Gender and Health (ICSGH)
Director: O.A. Hankivsky BA (Tor), MA, PhD (Wont), 778.782.4677 Tel, 778.782.4786 Fax, olena@sfu.ca

This institute anchors a vibrant interdisciplinary community of over 30 scholars, researchers and students. Its objectives and foci support the University's stratification in the areas of i) health, genomics and physiological sciences and ii) history, culture, social relations and behavior. The ICSGH complements the Faculty of Health Sciences and the Institute for Health Research and Education, which seek to integrate health and natural science research with population outcomes, societal application, and policy analysis. The ICSGH will also play a key role in the Faculty of Arts and Social Sciences which has identified health and public policy as a priority research area.

Each year, the institute will identify a key area of research that will be supported through seminars devoted to directed readings, public lectures, and an annual conference. Annual conferences will bring together local, national and international scholars, activists, and professionals from a number of disciplines and areas of research to consider conceptual and practical issues related to the institute's research mandate. Conferences will provide opportunities for discussion and debate, the development of networks and collaborative partnerships, and the chance to produce new and original research.

Gerontology Research Centre
Acting Director: A.Y. Wister HBA, MA, PhD (Wont), 778.782.5044 Tel, 778.782.5044 Fax, gero@sfu.ca, www.sfu.ca/grc

Established in 1982, the research centre promotes and conducts research on topics relating to aging and the aged, serves as a clearing house for information and provides consultation and technical assistance to the academic community, government, public and private organizations. The centre houses a specialized collection of research materials, maintains an active publications program, organizes workshops and conferences, and is a contributing member of two inter-university research consortia. Research activities focus on applied gerontology with concentrations in: aging and the built environment; health promotion and population health; prevention of victimization and exploitation of the elderly; older adult education; and changing demography and lifestyles. The centre is the Gerontology Program offers a post baccalaureate diploma in gerontology, a minor and a master of arts degree.

Centre for Global Political Economy
Director: S. McBride BSc (Lond), MA, PhD (McM), 778.782.4375 Tel, 778.782.4786 Fax, cgpe@sfu.ca, www.sfu.ca/cgpe

This centre is housed in the Department of Political Science, and involves faculty from other academic units at Simon Fraser University to provide a focus for existing strength in the field of global political economy and to win a position as an international centre for such research. This will be accomplished through external grants, high quality publications and a variety of other activities.

Institute of Governance Studies
Director: P.J. Smith BA, MA (McM), PhD (Lond), 778.782.4994 Tel, 778.782.4786 Fax, lgs@sfu.ca, psmith@sfu.ca

This institute furthers research on governance issues. Specifically, its objectives will include the following.

• to provide research focus on issues and problems of governance in Canada at the municipal, regional/metropolitan, provincial and federal levels, in comparative domestic and aboriginal systems and in the newly emerging global order
• to promote collaboration and research on issues of governance among scholars in a variety of disciplines located at Simon Fraser University
• to promote an institutional focus for international scholarship concerning issues of governance
• to provide a forum within Vancouver, British Columbia and Canada for the presentation and dissemination of research and ideas about governance issues
• to provide a facility in which data for the study of contemporary governance and related public policy can be collected, catalogued and made readily accessible through data management and exchange
• to provide a facility in which research and techniques are available for exchange with those having responsibility for contemporary governance

Institute for the Humanities
Director: A.M. Feenberg-Dibon Licence d'Anglais, Diplome d'Etudes Superieures (Sorbonne), PhD (Calif) 778.782.3763 Tel, 778.782.5786 Fax, afeenberg@sfu.ca, www.sfu.ca/humanities-institute

This institute provides various means to support and develop humanities programs and humanities concepts which are in existence throughout the University. The institute is devoted to the exploration and dissemination of knowledge about traditional and modern approaches to the humanities, and explores of critical perspectives that relate social concerns to the cultural and historical legacy of the humanities. The institute initiates and plans conferences, seminars, projects and publications in a range of interrelated humanities fields and social sciences. The audience for these activities will be found in the University and the community. The institute and the Department of Humanities are affiliated.

Centre for Labour Studies
Director: M. Leier BA, MA (S Fraser), PhD (Ntl), 778.782.5827 Tel, 778.782.5837 Fax, tessler@sfu.ca, www.sfu.ca/labour

The centre promotes the study and understanding of labor, working people, and their organizations from a comprehensive social, cultural, historical, political and economic perspective. The centre aims to promote a range of taught courses and programs (both credit and non-credit), offer research opportunities and assistance to both Simon Fraser University students and provincial labor organizations. The institute is mutually supportive and beneficial links between the academic and labour communities.

Centre for International Studies
Director: L.L. Cohen BA, MA (III), PhD (Col), 778.782.4518 Tel, 782.782.4786 Fax, cohen@sfu.ca

The centre provides a setting for students, faculty, and community members to explore the global issues in today's increasingly complex, inter-dependent and rapidly changing world. Through a comprehensive, rigorous, and focused program of studies, research efforts, and dialogue, the centre examines the most pressing international issues confronting the members of the global community. The centre's programs will explore the character and causation of various global problems, examine how such issues have been manifest in diverse regional and cultural settings, and evaluate the alternative policies that have been offered to manage or resolve existing global challenges.

While focused on the important task of analyzing and responding to challenges of the current global situation, the centre will offer practical training for the solution of major problems within and across societies, as well as developing tolerance and understanding among diverse cultures.
Thus, in addition to providing a solid academic basis for the analysis of international affairs, the centre will offer exposure to a global network that links students, citizens, policy makers, members of non-governmental organizations, and academic specialists.

David See-Chai Lam Centre for International Communication
Acting Director: T.A. Perry BA (Watashed, PhD (Indiana)), 778.782.9313 Tel, 778.782.5112 Fax, dlam-info@sfu.ca, www.cic.sfu.ca

This interdisciplinary centre, which began in 1989, integrates university, government, professional and business resources for research, education, training, and development activities. Its focus is on international, intercultural, and interlingual communication with an emphasis on the people and institutions of the Pacific Rim. Activities include international communication research and development projects, Chinese, Japanese and other East Asian culture, language and communication workshops and courses, cross-cultural management and communication seminars, and the Pacific Region Forum on Business and Management Communication.

Logic and Functional Programming Group
Director: V. Dahl MSc (Buenos Aires), PhD Aix-Marseille I, Dipl d’Et App Ax-Marseille II, 778.782.3426/3372 Tel, 778.782.3045 Fax, lfp@cs.sfu.ca, www.cs.sfu.ca/research/groups/Logic-Functional.html

This group was established in 1990 under Simon Fraser University’s policy AC-35 to facilitate research on the theory and applications of declarative programming, in particular logic programming, and function programming, constraint logic programming and logic grammars). It is strongly interdisciplinary comprising several Simon Fraser University unit members from several SFU units (computing science, linguistics, mathematics, engineering science), and two University of BC units (linguistics, computing sciences), the University of Victoria, Université de Province, Roskilde University, Trinity Western University, ILOG in France, and the University of Dallas.

The group aims at furthering state-of-the-art on theoretical and practical aspects of developing declarative programming tools, at investigating the uses of these tools for concrete intelligent systems, and facilitating result transfers and collaborations with other academic units and with industry. Members’ interests include logic, functional and constraint-based programming theory and tools, natural language processing, linguistic theory automation, deductive data bases, knowledge representation, hardware design, expert systems, robotics, distributed processing, mobile code and virtual worlds, tools for molecular biology, and software for the handicapped.

Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS)
Project Leader and Executive Director: P. B. Borwein BSc (WONi), MSc, PhD (Br Col), 778.782.4376 Tel, Manager: P. Borghardt, 778.782.6989 Tel, 778.782.7064 IRMACS Tel, 778.782.7085 Fax, irmacs@irmacs.sfu.ca

The IRMACS Centre is a unique, interdisciplinary research facility that enables collaborative interaction — intellectually, physically and virtually. IRMACS removes traditional boundaries between scientific disciplines and creates a stimulating environment for its researchers. Its programming, versatile, computationally sophisticated infrastructure for nearly 200 scientists whose primary laboratory tool is the computer. The centre is designed to facilitate communication and exchange of ideas. The configurable, open research facility efficiently incorporates a diverse community of scientists, research associates, and students, in a flexible manner. A proportion of the assignable space is also set aside for short-term and sabbatical visitors. Whether on-site or around the world, IRMACS researchers enjoy expert technical support and state-of-the-art computing, visualization and communication resources.

The centrepiece of the IRMACS centre is its presentation studio, seating up to one hundred people. The studio is a state-of-the-art audiovisual environment including a high-resolution 3D projection system. It also forms part of a global network of AccessGrid videoconferencing rooms.

The flexible meeting rooms and presentation studio have been configured to facilitate seminars, lecture series, workshops, medium-size research conferences and related activities. These rooms contain plasma computer displays with touch-screen interfaces. This creates a highly interactive environment, allowing lecture or meeting notes to be captured in real time and later distributed in standard file formats.

Access to computers is universal: one account and sign-on at any workstation provides researchers with access to all IT facilities. This infrastructure is intended to provide as much integration of researchers’ mobile computing devices as is feasible.

Mental Health, Law and Policy Institute
Director: R.M. Roesch BS (Arizona), PhD (Ill), 778.782.3370 Tel, 778.782.3427 Fax, mhpi@sfu.ca, www.sfu.ca/mhpi

This institute was established in 1991 to promote interdisciplinary collaboration in research and training in areas related to mental health, law and policy. Its membership is drawn from the Department of Psychology and the School of Criminology at Simon Fraser University as well as government and community agencies in Canada and internationally. The institute has received federal and provincial grants for a variety of research projects in the area of mental health and law, and also sponsors lectures and workshops. The institute also publishes forensic psychology books, including manuals for assessing risk for violence and recidivism and assessing mental health problems in pretrial jails.

Institute of Micromachine and Microfabrication Research
Director: M. Parameswaran BE (Madri), MSc, PhD (Atria), 778.782.4971 Tel, 778.782.4951 Fax, param@sfu.ca, www.sfu.ca/immr

This institute will stimulate, encourage and enhance micromachining and microfabrication research by providing a focus and resource base for collaborative and multidisciplinary research leading to new processes and new devices of benefit across a wide array of disciplines.

Centre for Operations Research and Decision Sciences
Director: A. Punnen BSc (Kerala), MSc (Kanpur), PhD (IIT Kanpur), 778.782.7611, 778.782.7488, apunnern@sfu.ca, http://cords.surrey.sfu.ca/cords.htm (website will be launched by August 2007)

The Centre for Operations Research and Decision Sciences (CORDS) is located at Simon Fraser University Surrey. With more than 15 members from various departments such as mathematics, computing science, business, resource and environmental management, the centre focus on research activities in the area of operations research—the science of optimal decision-making. Members undertake various applied research projects. For details, visit the website.

Pacific Institute for the Mathematical Sciences (PIMS)
Director: R. Choksi BSc (Tor), MS, PhD (Brown), 778.782.6655 Tel, 778.782.6657 Fax, sfu@pims.math.ca, www.pims.math.ca, www.pims.math.ca/PIMS/Offices/Simon_Fraser_University/

The Pacific Institute for the Mathematical Sciences (PIMS) is dedicated to promoting all aspects of the mathematical sciences by stimulating, coordinating and facilitating the activities of mathematical and computational scientists. This is achieved by:

• promoting research in mathematical sciences areas
• initiating and promoting mathematics education at all levels: K-12 and university
• initiating collaborations and strengthening ties between mathematical scientists in the academic community and those in the industrial, business and government sectors
• training of highly qualified personnel for academic and industrial employment
• developing new technologies to support research, communication and training in the mathematical sciences.

Associated with PIMS are projects of the Mathematics of Information Technology and Complex Systems NCE (MITACS).

Through the strength and vitality of its programs, PIMS and MITACS are able to serve the mathematical sciences community as a catalyst in many areas of significance: communication and dissemination of mathematical ideas through public outreach, mathematical education and training at all school levels; and creation of strong mathematical partnerships and links.

PIMS involves scientists in several faculties at Simon Fraser University faculties including the Faculties of Science, Applied Sciences, and Education. The PIMS community includes specialists in mathematics, statistics, computer science, mathematical physics, biology, chemistry, economics, operations research, management, engineering, and other fields involving mathematical methods. In addition, PIMS involves teachers in the mathematical sciences at all levels.

PIMS-SFU is the Simon Fraser University representative of PIMS and shares the goals and ideals of PIMS generally while also meeting the specific needs of the PIMS/MITACS and mathematical sciences community at this University.

Centre for Policy Research on Science and Technology (CPROST)
Director: R.K. Smith BA (Car), MA, PhD (S Frasier), 778.782.5116 Tel, smith@sfu.ca, www.sfu.ca/cprost

CPROST was established in 1988. Its primary research is the relationship between public policy and management of technology. The centre brings together practitioners and scholars to study the interaction of advances in science and technology, their implementation in the marketplace, and the impact on community and individual interests.

Centre for Public Policy Research
Director: N.D. Olevier BA (Col), MA (S Frasier), PhD (Br Col), 778.782.5289 Tel, 778.782.5288 Fax, mpp@sfu.ca, www.sfu.ca/cpp

The purpose of the centre is to promote interdisciplinary research, education, and dialogue on a broad range of public policy issues in Canada. The Centre supports and initiatives research, publications,
colloquia, conferences, visiting researchers and speakers, and international relationships. It is the research arm of the Public Policy Program at Simon Fraser University, complementing the master in public policy graduate degree program.

**Centre for Restorative Justice**
Co-directors: R.M. Gordon BA (La Trobe), MA (S Fraser), PhD (Br Col), 778.782.4305 Tel, E. Elliott, BPE (Ott), MSW (Car), PhD (S Fraser), 778.291.4730 Tel, 778.782.4140 Fax, cfrj@sfu.ca, www.sfu.ca/cfrj

The centre, in partnership with individuals, the community, justice agencies and Simon Fraser University exists to support and promote the principles and practices of restorative justice. The centre provides education, innovative program models, training, evaluation and research through a resource centre and meeting place that facilitates outreach, promotion, dialogue and advocacy.

**Centre for Scientific Computing**
Director: R.D. Russell BS, BA, MA, PhD (New Mexico), 778.782.4819 Tel, 778.782.4947 Fax, rdr@cs.sfu.ca, www.csc.sfu.ca

Motivated by the expanding role of scientific computation and mathematical modeling in science and engineering, the centre brings together interdisciplinary research teams from various Simon Fraser University faculties. It provides Simon Fraser University with a visible focus for computational research both on campus and in the wider Pacific Rim research community. The centre facilitates discussion between scientific computing research groups (through seminars, workshops, conferences) to provide advanced instruction in computational techniques and applications (through graduate and post-doctoral programs), and to pursue joint research ventures with industry, government and laboratories.

**Centre for Scottish Studies**
Director: S. Duguid AB (III), MA, PhD (S Fraser), 778.782.6810, 778.782.4504 Fax, hmcgrath@sfu.ca, www.sfu.ca/scottish

The centre's activities and programs promote teaching, research and community programming in Scottish studies. It supports and initiates research, publications, non-credit and credit instruction, colloquia, conferences, visiting speakers and international relationships. In the pursuit of these objectives, the centre provides support to existing individual, departmental and cross-departmental activities at Simon Fraser University in the area of Scottish studies.

**Centre for Studies in Print and Media Cultures**
Director: B.A. Schellenberg, BEd, BA (Winn), MA, PhD (Ott), 778.782.3095 Tel, 778.782.5737, schellen@sfu.ca, www.sfu.ca/~meverton/cspmc.htm

This centre was established to encourage cross-disciplinary research and exchange in the fields of print culture, media cultures in general communications technologies, the arts, and the public sphere. Current faculty members of the centre are from the departments and schools of communication, contemporary arts, English, history, interactive arts and technology, linguistics, the library, and political science. We welcome anyone in related areas of research to join us.

**Institute for Studies in Teacher Education**
Director: P.P. Grimmett BA (Newcastle, UK), BEd (Keefe), MA, MEd (Alta), EdD (Br Col), 778.782.4937 Tel, 778.782.3203 Fax

The general aim of the institute is to promote and carry out research in the area of teacher education. It also seeks to develop collaborative links with groups within and outside the university community.

**Institute for the Study of Teaching and Learning in the Disciplines**
Director: C.L. Amundsen BA (Washington), MEd (Alaska), PhD (Montreal), 778.782.4853, camundsa@sfu.ca

Newly approved by the Simon Fraser University Senate, this institute will open its doors in late 2007. The primary purpose of the Institute is to inspire, support and enhance faculty-led inquiry into all aspects of teaching and learning at the University. Faculty-led inquiry is discipline-focused, initiated by individual faculty members or groups of faculty, and related to questions about teaching and learning specifically of interest to faculty. Two aspects of the Institute will be primary in supporting faculty-led inquiry:

- Faculty-led inquiry projects: funds will be made available through the institute for faculty-led inquiry that adheres to specific criteria. The findings will be made public, through both informal University presentations and publications and more formal external presentations and publications.
- Faculty teaching scholars: these individual faculty members will serve as the core membership of the Institute. Committed to further developing their knowledge of the teaching and learning process in their respective disciplines, they will work with other faculty interested in such development through Institute-sponsored projects.

**Centre for Tourism Policy and Research**
Director: P.W. Williams BA (Ott), MA (Wat), PhD (Utah State), 778.782.3103 Tel, 778.782.4968 Fax, peter.williams@sfu.ca, www.sfu.ca/~dossa

This centre is housed within the School of Resource and Environmental Management. The school plays a leading role in managing the operation of the centre. The centre provides academic counsel to graduate students, supports the delivery of professional development seminars and workshops, and conducts tourism policy and planning research projects for public and private sector tourism organizations.

**Tri-University Meson Facility (TRIUMF)**
Director: A.C. Shotter BSc, ARCS (Lond), DPhil (Oxf), 604.222.1047 Tel, 604.222.1074 Fax, info@triumf.ca, www.triumf.ca

TRIUMF is a joint venture of the University of Alberta, Simon Fraser University, University of Victoria, Carleton University, University of Toronto and the University of British Columbia, funded under a contribution agreement with the National Research Council of Canada.

The TRIUMF facility is based on a 520MeV cyclotron capable of producing multiple proton beams simultaneously, each at a different energy level. TRIUMF has developed a world-class exotic ion beam facility, ISAC, producing beams of short lived isotopes for research. Pure scientific research at TRIUMF includes medium energy nuclear and particle physics, astrophysics, condensed matter studies and radiochemistry for the production of radiopharmaceuticals. Applied research includes the design of small cyclotrons, microchips, controls software and medical applications such as the use of proton beams and radioisotopes for cancer therapy.

**Centre for Wildlife Ecology**
Director: R.C. Ydenberg BSc (S Fraser), DPhil (Oxf), 778.782.4282 Tel, 778.782.3496 Fax, higham@sfu.ca, www.sfu.ca/biology/wildberg

The centre fosters high quality, graduate training and research, conducts basic and applied research in wildlife ecology, and provides knowledge and personnel that will help Environment Canada and other agencies meet the challenges of conservation in the 21st century. The central concept is to foster synergy between mission-oriented research and management policies of the Canadian Wildlife Service and the basic research agenda of Simon Fraser University.
Expiry dates of terms of office are shown where applicable.

Convocation
Chancellor – Chair
President and Vice-Chancellor
Registrar – Secretary
Members of senate
All faculty members
All graduates of Simon Fraser University
All persons whose names are added to the roll of Convocation by regulations of the senate

Board of Governors
Ex Officio
Chancellor
President and Vice-Chancellor
Appointed by Order-in-Council
R.G. Elton, July 2009
M. Francis, December 2008
B. Macdonald, February 2008
N. McKinstry, January 2008, chair
J. McPhee, July 2008
D. Pekarsky, January 2010
P. Rafferty, January 2009
S. Rasul, February 2008

Elected by Faculty Members
P. Percival, May 2009
J. Zaichkowsky, May 2010

Elected by Students from the Students
C.A. Apak, May 2008
D. Harder, May 2008

Elected by University Employees (excluding Faculty Members)
P. Johnston, May 2008

Administrative Officer
A. Watt, Director, University Secretariat

Senate
Ex Officio
Chancellor
President and Vice-Chancellor – Chair
Finance and Budget Committee
Vice-President, Academic
Vice-President, Research
Associate Vice-President, Academic
Dean of Applied Sciences
Dean of Continuing Studies
Dean of the Faculty of Arts and Social Sciences
Dean of the Faculty of Business Administration
Dean of the Faculty of Education
Dean of the Faculty of Health Sciences
Dean of Science
Dean of Graduate Studies
Dean of the Faculty of Science
Dean of the Faculty of Health Sciences
Dean of Graduate Studies

Elected by the Faculties
Faculty of Business Administration
M. Fizzell, May 31, 2009
J. Francis, May 31, 2008

Faculty of Education
D. Dagenais, May 31, 2008
N. Popadiuk, May 31, 2010

Faculty of Health Sciences
M. Hayes, May 31, 2010

Faculty of Science
N. Hauserland, May 31, 2008
T. Williams, May 31, 2010

Elected by Faculty Members Jointly
S. Black, May 31, 2008
T. Brennand, May 31, 2008
S. Easton, May 31, 2010
M. Ester, May 31, 2008
R. Gencay, May 31, 2009
D. Hannah, May 31, 2010
M. Joffres, May 31, 2008
M. Laba, May 31, 2010
P. Lijedahl, May 31, 2009
P. Percival, May 31, 2009
J. Peters, May 31, 2009
R. Russell, May 31, 2009
S. Thompson, May 31, 2010
R. Wakkary, May 31, 2010
D. Weeks, May 31, 2009

Elected by Convocation
C. Percival, May 31, 2008
D. Smith, May 31, 2008

Elected by Students
K. Abdulwahab, May 31, 2008
S. Brebner, May 31, 2008
S. Fox, May 31, 2008
G. Fox, May 31, 2008
D. Harder, May 31, 2008
K. Harding, May 31, 2008
A. Hemmingway, May 31, 2008
W. Javed, May 31, 2008
A. Lein, May 31, 2008
M. Letourneau, May 31, 2008
H. Malik, May 31, 2008
K. Tse, May 31, 2008
A. van Baarsen, May 31, 2008

Elected by University Employees (excluding Faculty Members)
P. Johnston, May 2008

Administrative Officer
A. Watt, Director, University Secretariat

Academic and Administrative Officials
Chancellor
B.C. Louie BComm (Br Col), LLB (S Fraser), FCA
President and Vice-Chancellor
M. Stevenson BA (Witw.), MA (Mich), PhD (Northwestern)
Provost and Vice-President, Academic
J.H. Waterhouse BSc, MBA, (Alta), PhD (Wash)
Vice-President, Advancement
C.A. Daminato, BSc (Qu), MBA (Br Col)
Vice-President, Finance and Administration
P.M. Hibbits BA (Tor), MBA (York, Can)
Vice-President, Legal Affairs
J.A. Osborne LLB (Edin), MA (Tor), LLM (Br Col)
Vice-President, Research
B.M. Pinto, BSc, PhD (Qu)
Vice-President, University Relations
W.G. Gill, BA, MA, PhD (Br Col)
Associate Vice-President, Academic and Associate Provost
W.R. Krane BA (Windsor), MA, PhD (York, Can)
Associate Vice-President, Financial Services
M. Pochurko BBA (S Fraser), CGA
Associate Vice-President, Research
N.H. Hauserland Diplom, PhD (Mün)
Associate Vice-President, Students and International
N. Angerilli BSc, PhD (S Fraser)
Chief Information Officer
J. Cranston BSc, MBA (Qu)
Dean of Applied Sciences
B.S. Lewis BA (Hamilton), MA, PhD (Iowa)
Dean of Arts and Social Sciences
L. Cormack BC (Calg), MA, PhD (Tor)
Dean of Business Administration (pro tem)
C.F. Smart BComm, MBA, PhD (Br Col)
Dean of Continuing Studies
J. LaBrie BS (Maine), MSA (St Michael’s, Vt), EdD (Penn)
Dean of Education
P. Shaker BA, MA, PhD (Ohio State)
Dean of Graduate Studies
J.C. Driver MA (Camb), PhD (Calif)
Dean of Health Sciences
J. O’Neill BA, MA (Sask), PhD (Calif)
Dean of Library Services and University Librarian
L. Copeland BSc (Tor), MA (Brandon), MLS (Col)
Dean of Science
M. Pilschke BSc (Montr), MPhil (Yale), PhD (Yeshiva)
Registrar and Senior Director, Student Enrolment
K. Ross BA (Alta), MA (Royal Roads)
Senior Director, Learning and Retention
N. Davidge-Johnston BSc (Wat), MSc (S Fraser)
Senior Director, Recreational Services and Athletics
W. Wedmann BA (S Fraser), MA (Oxf)
Senior Director, Student and Community Life
T. Rahilly BA (C’dia), MA, PhD (McG)
Executive Director, Human Resources
D. Nonis BA (Br Col), LLB (Qu)
Executive Director, Simon Fraser University Surrey
J. Curry BComm (Manit), MBA (S Fraser)
Director, Academic Advising and Student Success
R. Khan Hemani BBA (S Fraser)
Director of Academic Computing Services
L. Tolan
Director, Academic Planning
G. Nicholls BComm, Dip Mkt Res & Adv, MBA, DBL (S At)
Director, Academic Relations
G. Myers BSW (Manit), LLB (Br Col)
Director, Administration (Student Services)
P. Johnsen
Director of Alumni Relations
J. Horne BGS, MA (Calgary)
Director, Institutional Research and Planning (Acting)
J. Heslop BBA (S Fraser)
Director, Campus Security
N. Coutu
Director of Ceremonies and Events
H. Redekop
Director of Childcare Services
P. Frouws
Director, Communication Services (Student Services)
B. Henry BA, MBA (Br Col)
Director of Co-operative Education/Career Services
M. Klemetsi BBA (Regina)

Simon Fraser University 2007 • 2008 Calendar
Director, Centre for Online and Distance Education
J. Collinge BA, MA, PhD (S Fraser)

Director, Centre for Students with Disabilities
M. Stoddard BS (Calif), PhD (S Calif)

Director, Enrolment Services
M. Xiao BSc (Saint Louis, Philippines), MSc (Philippines)

Director, First Nations Student Centre
(to be announced)

Director, Global Initiatives
R. Martin BA, MA, PhD (S Fraser)

Director of Graduate Records, Admission and Registration
B. Williams

Director of Health and Counselling Centre
P. Whiting BSW (Vic, BC), MSW (McG)

Director, Human Rights
B.E. Taylor LLB (Dal)

Director, International Development and Faculty Engagement
S. Nanji BGS (S Fraser)

Director of Public Affairs and Media Relations
D. MacLachlan

Director of Records and Registration
R.B. MacLeod BComm (MAll)

Director, Registrar and Information Services, Simon Fraser University Vancouver
J. Lau, BA (S Fraser)

Director, Residence and Housing (acting)
J. Flagel (BBA (Wisconsin), MBA (Minn State)

Director, SFU International
J. Phillips BA (Bishop's)

Assistant Registrar, Senate and Academic Services
J. Hinchliffe BA (Br Col),MLS (S Fraser)

Director, Student Development and Programming Centre
L. Buckley BA (S Fraser), MA (Tor)

Director, Student Financials
(to be announced)

Director, University Curriculum and Institutional Liaison
S. Dench BA (Vic, BC), MA (S Fraser)

Director, University Secretariat
A. Watt BA (Hull)

University Archivist and Information Privacy Co-ordinator
I. Forsyth BA (McG), MA (W Laurier)

Library

University Librarian and Dean of Library Services
L. Copeland BSc (Tor), MA (Brandeis), MLS (Col)

Associate University Librarian (Bennett Public Services)
E. Fairey BA, MA (Br Col), MLS (Tor)

Associate University Librarian (Special Projects, Budget and Personnel)
T.M. Mundle BA, MLS (Br Col)

Associate University Librarian (Collections Services)
G. Bird BA (Cornell), MLS (Br Col)

Associate University Librarian (Processing and Systems)
G.W.B. Owen BA (S Fraser), MLS (Br Col)

Head, Acquisitions and Serials Division
P. Gaillie BA (Alta), MLS (Br Col)

Head, Cataloguing
P. Swanson BSc (Educ) (Wis), MLS (Br Col)

Head, Beilzberg Library
K. Marotz BA (S Fraser), MLS (Br Col)

Head, Document Delivery Services Division
S. Mackenzie BA, MLS (Br Col)

Head, Loans Division
G. Pomerleau

Head, Reference Division
T. Rosseel BA (Qu), MLS (Syr)

Head, Special Collections and Rare Books
E. Swanicik BA (Car), MLS (McG), MA (Leeds)

Head, Fraser Valley Real Estate Academic Library, SFU Surrey
N. Gick BSc, MLS (Br Col)

Head, Systems Division
M. Jordan BA (PEI), MA (McM), MLS (Br Col)

Gifts and Contemporary Literature Collection Librarian
T. Power BA (S Fraser), MLS (Br Col)

Electronic Resources Librarian
D.S. Taylor BA, BEd, MLS (Br Col)

Systems Librarian
N. Saklikar BA (S Fraser), MLS (Br Col)

Maps/Data/GIS Librarian
W.G. Prowesan BA (S Fraser), MLS (Br Col)

Digital Initiatives Librarian
I. Song BMedSc (NBethene), MLS (Br Col)

Liaison Librarians
C. Alistad BA, BEd, MLS (Br Col)
M. Bodnar BA (S Fraser), MLS (Br Col)
M. Bubber BFA (Sask), MLS (WOnT)
M. Crouch BA (Ohio State), MLS (Kent State)
H. De Forest BA, MLS (Br Col), MA (Qu)
N. Gjertsen BA, MLS (Br Col)
C. Goldsmith BA, MLS (Br Col)
C. Graebner BA (Car), MLS (WOnT)
P.E. Groves BA (Wat), MLS (Br Col)
K. Minkus BA (OTT), MLS (Br Col)
I. Nisieto BA, MA (Belgrade), MLS (Br Col)
L. Rimmer BSc (S Fraser), MLS (Alta)
S. Roberts BA (Sask), MLS (WOnT)
G. Turino BA (Windsor), MLS (Tor)
S. Wong BA (Vic, BC), MLS (Br Col)

Technical Services Librarian
F. Dodd BA (Calif), MLS (Br Col)

Cataloguing Librarian
M. Reid BA (Winn), MLS (Dal)

Librarians, Belzberg Library
H. De Forest BA, MLS (Br Col), MA (Qu)
M. McIntosh BA (Calg), MLS (Alta)
N. Smart BA (McG), MLS (Br Col)
G. Turino BA (Windsor), MLS (Br Col)

Librarians, Fraser Valley Real Estate Academic Library, SFU Surrey
A. Alistad BA, BEd, MLS (Br Col)
N. Gjertsen BA, MLS (Br Col)
G. Turino BA (Windsor), MLS (Tor)

BC Electronic Library Network Manager
A. Cocchia BA (Br Col), MLIS (McG)

Project Co-ordinators
H. Morrison BA, MLS (Alta)
G. Coleman BA (Tor), MLS (Br Col)

Student Learning Commons

Director
E. Fairey BA, MA (Br Col), MLS (Tor)

Learning Services Co-ordinator
D. McGee Thompson BA (S Fraser), MA (Br Col)

Writing Services Co-ordinator
A. Goldrich-Jones, BA, MA (Br Col), PhD (Rensselaer)

Excellence in Teaching Awards

2005
A. Duncan, Business Administration
P. St. Pierre, English
J. Hyndman, Geography

2004
S. Verdun-Jones, Criminology

P. Budra, English
M. Leier, History

2003
H. Bai, Education
Z. Punja, Biological Sciences
C. Thong, Biological Sciences

2002
D. Wilson, Biological Sciences
M. Dubiel, Mathematics
A. Heard, Political Science

2001
M. Laba, Communication
W. Cleveland, History
T. McLellan, Biological Sciences

2000
C.R. Day, History
G. Leach, Chemistry
P. Howard, Communication

1999
J. Busuttil-Tsi, Political Science
S. Holdcroft, Chemistry
B. Trux, Communication

1998
L. Dill, Biology
G. Poole, Psychology
D. Zapfe, Contemporary Arts

1997
M. Jackson, Criminology
J. Gittlow, English
J.S. Craig, History

1996
A.L. Liestman, Computing Science
S. Roberts, English
D.A. Ross, Political Science

1995
G. Day, Resource and Environmental Management
M. Moore, Biological Sciences
H. Trotter, Physics

1994
J. Dahn, Physics
A. MacKinnon, Education
J. Sturrock, English

1993
G. Gries, Biological Sciences
M. Manley-Casimir, Education
D. Sutton, Chemistry

1992
L. Boland, Economics
M. Gates, Sociology and Anthropology
S. Wendell, Women's Studies

1991
C. Banerjee, English
R. Schwindt, Economics
M. Wexler, Business Administration

1990
C.I. Dyck, History
T. Grieve, English
R. Peterman, Resource and Environmental Management

1989
N. Dyck, Sociology and Anthropology
D. Krebs, Psychology
R. Pomeroy, Chemistry

1988
A. Harestad, Biological Sciences
N. Robinson, Education
S. Wasserman, Education

1987
F. Fisher, Biological Sciences
T. Kirschner, Languages, Literatures, and Linguistics
R. Keepke, History

1986
A. Aberbach, History
R. Mathewes, Biological Sciences
R. Menzies, Criminology

1985
R.H. Dunham, English
K.N. Slessor, Chemistry
Endowed Chairs and Professors
Burnaby Mountain Endowed Professors
B. Mohar, Mathematics
P. Mooney, Physics
C.K. Patton, Sociology and Anthropology, Women’s Studies
F.J. Pelletier, Linguistics, Philosophy
R.M. Peterman, Resource and Environmental Management
S. Robinovitch, Kinesiology
A.J. Robson, Economics
S.C. Sahinap, Computing Science
J.K. Scott, Health Sciences
G. Tardos, Computing Science
J. Taylor, Geography, History
G.F. Tibbets, Kinesiology
D.J.E. Vodado, Chemistry
J.R. Welch, Archaeology, Resource and Environmental Management
P.H. Winne, Education
S.C. Wright, Psychology
Y. Zhao, Communication

EbcO/Epic NSERC Industrial Chair in Intelligent Software Systems
Q. Yang, Computing Science (junior chair)

NSERC/University-Government Research Chair in Behavioural Ecology
Junior Chairholder T.D. Williams with Environment Canada

Chancellors Emeriti
J. Segal, J. Williams, and H. Wong (CM, OBC)

Presidents Emeriti
J.P. Blaney, B.C. (Br Col), M.D. (Calif)
W.G. Saywell, B.A., M.D. (Tor)

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Simon Fraser University 2007 - 2008 Calendar