Enrolment 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: Student 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 and its health plans. The University discloses the personal information to the student society only for those purposes. Please contact the society general office if you have any questions about its collection, use and disclosure of the information.

If you have any questions about the collection, use and disclosure of your personal information by the University, please contact the Registrar, MBC 3300, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A 1S6; 604.291.3111.

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. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, social insurance number), student contact information (address and telephone number), student demographic characteristics, enrollment information, previous education, and labor activity.

The federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used only for statistical purposes, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student. Students who do not wish to have their information used are able to ask Statistics Canada to remove their identification and contact information from the national database.

Further information on the use of this information can be obtained from Statistics Canada's web site www.statcan.ca or by writing to the Post secondary Section, Centre for Education Statistics, 17th floor, R.H. Coats Building, Holland Avenue, Ottawa, K1A 0T6.

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 also published 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, money orders in Canadian funds, or a cheque drawn on a Canadian bank (made payable to Simon Fraser University).

The Calendar is distributed to many universities, colleges, secondary schools and public libraries in British Columbia, and to all Canadian universities for reference purposes.

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Editor
J. Hinchliffe BA (Br Col), MALIS (S Fraser)

Editorial Assistant
S. Walter, Student Services

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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 2005 approximately 23,645 students were enrolled in courses. At the June 2005 Convocation ceremonies 3,600 credentials were conferred, while at the University’s October Convocation, 1,900 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 Chief Dan George Centre for Advanced Education, 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 70,000 people annually. Each semester approximately 2,400 undergraduates and 400 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 redevelopment 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, Interactive Arts and Technology, and Mathematics.

Students entering their first year of university at Simon Fraser University Surrey have a choice of 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 1,100 FTE undergraduate and graduate students are enrolled in these programs, a number which is projected to increase to 2,500 FTEs by the year 2010.

On September 8, 2006 the University will be moving into its permanent home at Central City in the heart of Surrey. The new campus will occupy 21,500 square metres in the stunning facility, which was designed by renowned architect Bing Thom.
### University Telephone Numbers

#### Burnaby Mountain Campus

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<th>Service</th>
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<td>604.291.3469</td>
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<tr>
<td>Parking</td>
<td>604.291.4577</td>
<td>604.291.5386</td>
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<td>Winter Road Conditions</td>
<td>604.291.3100</td>
<td>604.291.3469</td>
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<tr>
<td>Parking (24 hours)</td>
<td>604.444.4929</td>
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<tr>
<td>Faculty of Applied Sciences</td>
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<td>604.291.5802</td>
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<td>Graduate Studies</td>
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<td>604.291.3080</td>
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<td>Student Admission, Registration, Records</td>
<td>604.291.3188</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>
<td>604.291.3869</td>
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<td>President's Office</td>
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<td>Simon Fraser Student Society Ombuds Officers</td>
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<td>Financial Assistance and Awards</td>
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<td>U-Pass Office</td>
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<td>External Relations</td>
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#### Simon Fraser University Vancouver

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<td>SFU Bookstore</td>
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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 meet 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 credit hours 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. 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 credit hours within the faculty to qualify for a degree. If in doubt, seek advice from Academic Advising.

Honors Program

An honors degree is comprised of 132 credit hours in a specified honors program including approximately 48-50 credit hours 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 credit hours including the completion of a specific joint honors program, which would normally consist of a total of at least 50 credit hours 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 credit hours and, normally, completion of a major program. A major program consists of approximately 28 to 30 credit hours 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 credit hours including the completion of a joint major program. The specific joint major requires at least 30 credit hours 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 meet 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 credit hours as specified in the subject. To qualify for a specific minor, at least seven credit hours 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 credit hours 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

Contents
Undergraduate Degree Requirements

Students admitted to the University beginning in the fall 2006 semester 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 credit hours of courses designated as meeting writing, quantitative, or breadth requirements with a grade of C- or better.

Writing Requirements

Courses with a “W” designation are writing intensive, and will assist students to learn the course content through the process of writing assignments. These courses will help students to improve their writing abilities and overall communication skills.

Writing-designated courses have the letter “W” in their title, and are also identified at the end of the course description, just after the prerequisite information. For example (italics added):

CRIM 300 - W Current Theories... Criminology
A detailed examination of current theories...
Prerequisite: CRIM 101. Writing.
Students must achieve a grade of C- or better in a W course to obtain the W credit.

Lower Division W Requirements

One lower division W course (3 credit hours or more)
Students must complete their first W course within their first 60 credit hours of a degree program.

Students transferring from a BC college with 60 credit hours should complete a transferable W course prior to

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 credit hours).

Program Admission Requirements

• Successful completion of an approved program comprised of 30 credit hours of third and fourth year courses, and some graduate courses if appropriate.
• At least 15 credit hours 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 post 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 registration 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 credit hours, including at least nine credit hours 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 semester.
• 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 credit hours, including at least eight credit hours in the student's area of concentration, normally be taken after admission to the program.
• Credit hours applied to one diploma may not be applied to another Simon Fraser University certificate or diploma, or degree, and vice versa.

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 credit hours). 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

• Completion of lower division prerequisites, if required.
• Completion of the diploma within five years of admission to the program.

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 credit hours).

Program Admission Requirements

• Successful completion of an approved program comprised of 30 credit hours of third and fourth year courses, and some graduate courses if appropriate.
• At least 15 credit hours 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 post 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 registration 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 credit hours, including at least nine credit hours 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 semester.
• 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 credit hours, including at least eight credit hours in the student's area of concentration, normally be taken after admission to the program.
• Credit hours applied to one diploma may not be applied to another Simon Fraser University certificate or diploma, or degree, and vice versa.

Co-operative Education

A co-operative education program consists of four or five work terms to be completed while doing regular academic terms. See "Co-operative Education" on page 231.

Changing Programs

A student who elects to take a double major or a major-minor program may change his/her decision and graduate with a major only, provided that the requirements for the major and requirements of the faculty concerned have been fulfilled. Notification of such changes must be filed with the departments concerned and Student Services.

Second Bachelor’s Degrees

A student who already holds a bachelor’s degree(s) from an approved institution may complete a second or subsequent bachelor’s degree at the University, subject to the following conditions and regulations.

The basic requirement for a further bachelor's degree is the completion of the upper division requirements associated with a first bachelor's degree (except for the BEd degree – see "Bachelor of Education as a Second Degree" on page 195). Prior completion of lower division prerequisites may also be required or may be waived at the discretion of the department or program in which the further degree is being sought.

A student may not enrol in a further bachelor's degree program in a subject in which she/he already holds a degree. A student who has a minor (or equivalent) 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 Simon Fraser University admission. However, the normal upper division residency requirement applies: at least two thirds of the upper division course work for the degree must be completed at Simon Fraser University. Some faculties may have additional residency requirements.

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

For the 2006/7 academic year students admitted to second degrees are deemed to have met the designated Breadth requirements, one of the two required Q courses and one of the W courses. (The remaining W and Q courses must be three credit hours each).

For more information on the WQB breadth requirements, see "Writing, Quantitative and Breadth Requirements" on page 7.

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 credit hours).

Program Admission Requirements

• Successful completion of an approved program comprised of 30 credit hours of third and fourth year courses, and some graduate courses if appropriate.
• At least 15 credit hours 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 post 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 registration 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 credit hours, including at least nine credit hours 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 semester.
• 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 credit hours, including at least eight credit hours in the student's area of concentration, normally be taken after admission to the program.
• Credit hours applied to one diploma may not be applied to another Simon Fraser University certificate or diploma, or degree, and vice versa.

Co-operative Education

A co-operative education program consists of four or five work terms to be completed while doing regular academic terms. See "Co-operative Education" on page 231.

Writing Requirements

Courses with a “W” designation are writing intensive, and will assist students to learn the course content through the process of writing assignments. These courses will help students to improve their writing abilities and overall communication skills.

Writing-designated courses have the letter “W” in their title, and are also identified at the end of the course description, just after the prerequisite information. For example (italics added):

CRIM 300 - W Current Theories... Criminology
A detailed examination of current theories...
Prerequisite: CRIM 101. Writing.
Students must achieve a grade of C- or better in a W course to obtain the W credit.

Lower Division W Requirements

One lower division W course (3 credit hours or more)
Students must complete their first W course within their first 60 credit hours of a degree program.

Students transferring from a BC college with 60 credit hours should complete a transferable W course prior
to admission to Simon Fraser University, and alternatively they should register in a lower 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 credit hours or more)

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

For a list of currently offered W courses, see students.sfu.ca/wqb

**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 I**
  - An introduction to financial accounting...
  - Prerequisite: 12 credit hours. 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 credit hours or more)

Students must complete their first Q course within their first 60 credit hours of a degree program.

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

For a list of currently offered Q courses, see students.sfu.ca/wqb

**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...**
- **An introduction to selected theories about human...**
  - Communication.

Students must complete a total of 24 credit hours 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 throughout their degree programs, taking courses at the lower or upper division.

- **Breadth-Humanities**
  - **two courses labelled as Breadth-Humanities (B-Hum, 6 credit hours)**

- **Breadth-Science**
  - **two courses labelled as Breadth-Science (B-Sci, 6 credit hours)**

**Breadth-Social Science**
- **two courses labelled as Breadth-Social Sciences (B-Soc, 6 credit hours)**

**Two Additional Breadth Courses**
- **two courses outside the student's major program (undesignated, 6 credit hours)**

These additional courses may or may not be designated as breadth, and in most cases will fulfill the particular faculty or program breadth requirements.

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 Engineering Science 100 as one of their B-Sci requirements. Similarly, a student majoring in English will not be able to count English 101 as one of their B-Hum requirements. Students may complete breadth courses throughout their degree programs, taking courses at the lower or upper division.

For a list of currently offered B courses, see students.sfu.ca/wqb

**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 W, 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-Hum or B-Soc, 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 presupposes 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 register in one of both of these courses. Students required to register in one or both of these courses must do so within their first 30 credit hours at Simon Fraser University, and complete the course within 45 credit hours of a degree program. 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 credit hours, students will be blocked from registering in further course work at Simon Fraser University until competency in English and Math are demonstrated.

This competency can be demonstrated by:
- retaking English 12 or high school Math, or
- achieving a score of 5 on the essay section of the LPI (with a minimum of 60% on each of the subsections for English competency), or
- achieving a score of 20 out of 30 on the Simon Fraser University Q placement test (if the student has not taken this test earlier) for mathematics competency, or
- by registering in transferable college courses (see “Admission from BC and Yukon Community and University Colleges” on page 22).

Students transferring to Simon Fraser University with 60 credit hours are recommended to register as soon as possible in FAL or FAN if they are required to take one or both of these courses.

**Foundations of Academic Literacy (FAL X99)**

This course introduces students to the kinds of reading and writing they will encounter in lower-division courses across university disciplines. (See “Foundations of Academic Literacy FAL” on page 389 within the Course Catalogue section of this Calendar.)

Credits earned in FAL X99 are additive, and do not count towards the total credits required for a degree. The grade received in FAL X99 is included in calculation of the cumulative grade point average. Students must receive a C or better in this course to proceed to a W course. Students may attempt this course twice.

**Foundations of Analytical and Quantitative Reasoning (FAN X99)**

This course is for students who need to upgrade their quantitative background in preparation for Q courses, or for those who wish to refresh their skills after several years away from mathematics. (See “Foundations of Analytical and Quantitative Reasoning FAN” on page 389 within the Course Catalogue section of this Calendar.)

Credits earned in FAN X99 are additive, and do not count towards the total credits required for a degree. The grade received in FAN X99 is included in calculation of the cumulative grade point average. Students must receive a C or better in this course to proceed to a W course. Students may attempt this course twice.

Free Q placement testing is also available. For information on the Quantitative Placement Test, please see www.math.sfu.ca and look for the Q Test link. Students who receive a pass on this test may bypass FAN X99 and may instead register directly in a Q course.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>WQB Graduation Requirements</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>W - Writing</td>
<td>6 Must include at least one upper division course, normally within the student's discipline</td>
<td></td>
</tr>
<tr>
<td>Q - Quantitative</td>
<td>6 Q courses may be upper or lower division</td>
<td></td>
</tr>
<tr>
<td>B - Breadth</td>
<td>6 18 Designated Breadth 6 credit hours Social Sciences: B-Soc</td>
<td></td>
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<tr>
<td></td>
<td>6 6 credit hours Humanities: B-Hum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 6 credit hours Sciences: B-Sci</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 Additional Breadth 6 credit hours outside the student's major program (may or may not be designated courses, and will likely help fulfill individual degree program requirements)</td>
<td></td>
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</tbody>
</table>

Total W/QB 36
Special WQB Requirements

**Joint or Double Majors**
Students taking joint or double majors and honors will not be required to take double W, Q, and B 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**
For the 2006/7 academic year students admitted to second degrees are deemed to have met the designated Breadth requirements, one of the two required Q courses and one of the W courses. (The remaining W and Q courses must be three credit hours each). See “Second Bachelor’s Degrees” on page 7.

Graduate Programs
Programs of advanced learning and research leading to master’s and doctoral degrees are offered. Doctoral programs engage students in research, either independently or in collaboration with larger research groups. Master’s programs introduce students to the research process or prepare them with critical and analytical skills for the professions. Graduate diploma programs provide specialized combinations of courses for students who wish to upgrade their knowledge and skills at an advanced level. For a complete list of all graduate and undergraduate degrees offered by the University, See “Programs Offered” on page 6.

University Degrees

**Honorary Degrees**
- Doctor of Fine Arts *honoris causa*
- DFA (Fine Arts)
- Doctor of Laws *honoris causa*
- LLD (Laws)
- Doctor of Letters *honoris causa*
- DLitt (Letters)
- Doctor of Science *honoris causa*
- DSc (Science)

**Degrees**

**Faculty of Applied Sciences**
- Bachelor of Applied Science (Honors)
- Bachelor of Arts
- Bachelor of General Studies (Applied Sciences)
- Bachelor of Science (Honors)
- Bachelor of Science
- Bachelor of Science (Information Technology, Tech BC)
- Bachelor of Science (Interactive Arts, Tech BC)
- Bachelor of Science (Kinesiology) (Honors)
- Bachelor of Science (Kinesiology)
- Master of Applied Science
- Master of Applied Science (Information Technology)
- Master of Applied Science (Interactive Arts)
- Master of Arts
- Master of Arts under Special Arrangements
- Master of Engineering
- Master of Resource Management
- Master of Resource Management (Planning)
- Master of Science
- Master of Science under Special Arrangements
- Doctor of Philosophy
- Doctor of Philosophy under Special Arrangements

**Faculty of Arts and Social Sciences**
- Bachelor of Arts (Honors)
- Bachelor of Arts (Joint Honors)
- Bachelor of Arts
- Bachelor of Fine Arts
- Bachelor of General Studies
- Master of Arts
- Master of Arts Liberal Studies
- Master of Arts under Special Arrangements
- Master of Fine Arts

**Faculty of Business Administration**
- Master of Public Policy
- Master of Publishing
- Master of Urban Studies
- Doctor of Philosophy
- Doctor of Philosophy under Special Arrangements

**Faculty of Education**
- Bachelor of Education (Honors)
- Bachelor of Education
- Master of Arts
- Master of Arts under Special Arrangements
- Master of Education
- Master of Science
- Master of Science under Special Arrangements
- Doctor of Education
- Doctor of Philosophy
- Doctor of Philosophy under Special Arrangements

**Faculty of Health Sciences**
- Bachelor of Arts (Honors)
- Bachelor of Arts
- Master of Science

**Faculty of Science**
- Bachelor of Science (Honors)
- Bachelor of Science
- Master of Environmental Toxicology
- Master of Pest Management
- Master of Science
- Master of Science under Special Arrangements
- Doctor of Philosophy
- Doctor of Philosophy under Special Arrangements

**Certificates and Diplomas**

**All Faculties**
- Post Baccalaureate Diploma

**Faculty of Applied Sciences**
- Certificate in Applied Human Nutrition
- Certificate in Computing Studies
- Certificate in Health and Fitness Studies
- Post Baccalaureate Diploma

**Faculty of Arts and Social Sciences**
- Certificate in French Canadian Studies
- Certificate in First Nations Language Proficiency
- Certificate in French Language Proficiency
- Certificate in Hellenic Studies
- Certificate in Italian Studies
- Certificate in Labor 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 French and Education
- Post Baccalaureate Diploma in Gerontology
- Post Baccalaureate Diploma in Humanities
- 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

**Post Baccalaureate Diploma in Communication**
- Post Baccalaureate Diploma in Computing Science
- Post Baccalaureate Diploma in Kinesiology
- Graduate Diploma in Quantitative Methods in Fisheries Management

**Post Baccalaureate Diploma in Criminology**
- Post Baccalaureate Diploma in Criminology (General)
- Post Baccalaureate Diploma in Criminology (Advanced)
- Certificate in Ethnic and Intercultural Relations
- 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 Labor 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 French and Education
- Post Baccalaureate Diploma in Gerontology
- Post Baccalaureate Diploma in Humanities
- Post Baccalaureate Diploma in Social Policy Issues
- Post Baccalaureate Diploma in Teaching English as a Second Language
- Graduate Diploma in Urban Studies

**Post Baccalaureate Diploma in 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

**Certificate in Chinese Studies**
- Certificate in Chinese Studies
- Certificate in Criminology (General)
- Certificate in Criminology (Advanced)
- Certificate in Ethnic and Intercultural Relations
- 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 Labor 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 French and Education
- Post Baccalaureate Diploma in Gerontology
- Post Baccalaureate Diploma in Humanities
- Post Baccalaureate Diploma in Social Policy Issues
- Post Baccalaureate Diploma in Teaching English as a Second Language
- Graduate Diploma in Urban Studies

**Post Baccalaureate Diploma in 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 Science
- Certificate in Actuarial Mathematics
- Certificate in Forestry Geoscience
- Post Baccalaureate Diploma in Biological Sciences
- Graduate Diploma in Bioinformatics

### Graduate Studies
- Graduate Certificate in Development Studies

### Credentials by Program

**Key to abbreviations used below**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Program</th>
</tr>
</thead>
</table>
| Bachelor of Arts (BA) | Bachelor of Arts
| Bachelor of Arts (Honors) (BA honors) | Bachelor of Arts (Honors) |
| Bachelor of Applied Science (BASc) | Bachelor of Applied Science |
| Bachelor of Business Administration (BBA) | Bachelor of Business Administration |
| Bachelor of Business Administration (Honors) (BEd honors) | Bachelor of Education (Honors) |
| Bachelor of Fine Arts (BFA) | Bachelor of Fine Arts |
| Bachelor of General Studies (BGS) | Bachelor of General Studies |
| Bachelor of Science (BSc) | Bachelor of Science |
| Bachelor of Science (BSc honors) | Bachelor of Science (Honors) |
| Certificate (Certificate) | Certificate |
| Co-operative Education Program (co-op) | Co-operative Education Program |
| Diploma (diploma) | Post baccalaureate diploma |
| Doctor of Education (EdD) | Doctor of Education |
| Extended Minor (extended minor) | Extended Minor |
| Graduate Certificate (graduate certificate) | Graduate Certificate |
| Graduate Diploma (graduate diploma) | Graduate Diploma |
| Graduate Diploma in Bioinformatics (graduated diploma) | Graduate Diploma in Bioinformatics |
| Master of Arts (MA) | Master of Arts |
| Master of Applied Science (MALS) | Master of Applied Science |
| Master of Business Administration (MBA) | Master of Business Administration |
| Master of Education (MED) | Master of Education |
| Master of Engineering (MEng) | Master of Engineering |
| Master of Environmental Toxicology (MET) | Master of Environmental Toxicology |
| Master of Fine Arts (MFA) | Master of Fine Arts |
| Minor (minor) | Minor |
| Master of Peat Management (MPM) | Master of Peat Management |
| Master of Public Policy (MPP) | Master of Public Policy |
| Master of Publishing (MPub) | Master of Publishing |
| Master of Resource Management (MRM) | Master of Resource Management |
| Master of Science (MSc) | Master of Science |
| Master of Urban Studies (Murb) | Master of Urban Studies |
| Doctor of Philosophy (PhD) | Doctor of Philosophy |

**Actuarial Mathematics**
- certificate

**Actuarial Science**
- BSc, honors, certificate, MSc
- Advanced Professional Studies in Education – graduate diploma

**Anthropology**
- BA, minor, extended minor, honors, co-op

**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**
- BA, minor

**Anthropology**
- BA joint major

**Arts, General**
- BA, extended minor

**Arts Education**
- MA, Ed, PhD

**Asia-Canada**
- extended minor

**Biocomputational Science**
- BA, minor, honors, MSc, PhD, diploma, co-op

**Biological Physics**
- MSc, 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

**Canadian 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

**Chemical Physics**
- BSc, honors, MSc, PhD, 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 Studies**
- certificate

**Contemporary Arts**
- BA, BFA, minor, extended minor, minor, joint major, MFA

**Counselling and Human Development**
- minor

**Counselling Psychology**
- MA, EdD

**Criminology**
- BA, minor, extended minor, honors, MA, PhD, general and advanced certificate, diploma, co-op

**Criminology and Women's Studies**
- BA joint major

**Curriculum and Instruction**
- minor, MA

**Curriculum, Theory and Implementation**
- PhD

**Dance**
- BFA, extended minor

**Development Studies**
- graduate certificate

**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**
- BSc, 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

**Environmental Chemistry**
- minor

**Environmental Education**
- minor, diploma

**Environmental Science**
- BSc, honors, co-op

**Environmental Toxicology**
- minor, MET

**Ethnic and Intercultural Relations**
- certificate

**Executive MBA**
- MBA

**Family Studies**
- certificate

**Film**
- BFA, extended minor

**Fine and Performing Arts**
- minor

**Fine Arts**
- Interdisciplinary Studies – MFA

**First Nations Language Proficiency**
- certificate

**First Nations Studies**
- minor, diploma

**First Nations Studies and Archaeology**
- BA joint major

**Forestry Geoscience**
- certificate

**French**
- BA, extended minor, honors, MA, co-op

**French Canadian Studies**
- certificate

**French and Education**
- diploma

**French Education**
- minor

**French, History, Politics**
- BA joint major

**French Language Proficiency**
- certificate

**Gender Studies**
- minor

**General Science**
- BSc

**General Studies**
- BGS

**Geographic Information Science**
- BSc, honors

**Geography**
- BA, minor, extended minor, honors, MA, MSc, PhD, certificate, co-op

**Geography and Economics**
- Environmental

**Specialty**
- BA joint major

**Gerontology**
- minor, MA, diploma

**Global Asset and Wealth Management**
- MBA

**Global Health**
- graduate diploma

**Health and Fitness Studies**
- certificate

**Health Sciences**
- BA, minor, honors, Hellenic Studies

**History**
- BA, minor, extended minor, honors, MA, PhD, co-op

**History and Humanities**
- BA joint major

**History and Human Rights**
- BA joint major, minor, diploma, co-op

**Humboldt**
- German Studies – MA, PhD

**Italian Studies**
- certificate

**International and Global Education**
- minor

**International and Global Education**
- minor

**International Studies**
- BA, minor, honors

**International and Global Education**
- minor

**International Studies**
- minor

**International and Global Education**
- minor

**Japanese**
- BA, extended minor, honors

**Japanese**
- certificate

**Japanese Studies**
- minor

**Kinesiology**
- BSc, minor, honors, MSc, PhD, diploma, co-op

**Kinesiology**
- BA, minor, honors, MSc, PhD, diploma, co-op

**Labor Studies**
- minor, certificate

**Latin American Development Studies**
- BA joint major, minor

**Latin American Development Studies**
- 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 Economics**
- BA joint major

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**Latin American Development Studies and Economics**
- BA joint major

**Latin American Development Studies and Economics**
- BA joint major
<table>
<thead>
<tr>
<th>Programs Offered</th>
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<tbody>
<tr>
<td>Latin American Development Studies and History – BA joint major</td>
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<tr>
<td>Latin American Development Studies and Political Science – BA joint major</td>
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<tr>
<td>Latin American Development Studies and Sociology and/or Anthropology – BA joint major</td>
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<td>Learning Disabilities – minor</td>
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<td>Legal Studies – minor, diploma</td>
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<td>Liberal Arts – certificate, co-op</td>
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<tr>
<td>Liberal Studies – MALS</td>
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<tr>
<td>Linguistics – BA, minor, extended minor, honors, MA, PhD</td>
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<tr>
<td>Literacy Instruction – certificate</td>
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<tr>
<td>Management and Systems Science – BSc, honors, co-op</td>
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<tr>
<td>Management of Technology MBA – MBA</td>
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<tr>
<td>Marine Science</td>
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<tr>
<td>Mathematical Physics – BSc (honors only)</td>
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<tr>
<td>Mathematics – BA, minor, extended minor, honors, BSc, minor, honors, MSc, PhD, co-op</td>
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<td>Mathematics and Computing Science – BSc joint major, joint honors</td>
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<td>Master of Arts – co-op</td>
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<td>Native Studies Research – certificate, co-op</td>
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<tr>
<td>Natural Resource Management and Business Administration – MRM, MBA joint</td>
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<tr>
<td>Nuclear Science – minor</td>
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<td>Pest Management – MPM</td>
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<tr>
<td>Philosophy – BA, minor, extended minor, honors, MA, co-op</td>
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<td>Philosophy and Humanities – BA joint major</td>
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<td>Physical Education – minor</td>
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<tr>
<td>Physical Geography – BSc, minor, honors, co-op</td>
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<td>Physics – BSc, minor, honors, MSc, PhD, co-op</td>
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<td>Physics and Physiology – BSc (honors only)</td>
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<td>Political Science and Economics – BA joint major</td>
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<td>Political Science and Women’s Studies – BA joint major</td>
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<td>Population and Public Health – MSc</td>
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<td>Professional Practices – certificate</td>
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<td>Psychology – BA, minor, extended minor, honors, MA, PhD, co-op</td>
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<td>Psychology and Criminology – BA joint major</td>
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<td>Psychology and Women’s Studies – BA joint major</td>
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<td>Public Administration and Community Services – extended minor</td>
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<td>Public Policy – MPP</td>
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<td>Publishing – minor, MPub</td>
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<td>Quantitative Methods in Fisheries Management – graduate diploma</td>
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<tr>
<td>Resource and Environmental Management – MRM, MRM (Planning), PhD, co-op</td>
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<td>Science, General – BSc</td>
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<td>Secondary Mathematics Education – minor, MSc, MEd</td>
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<td>Senior Citizens, Certificate for – certificate</td>
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<tr>
<td>Social Policy Issues – diploma</td>
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<td>Sociology – BA, minor, extended minor, honors, co-op</td>
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<tr>
<td>Sociology and Anthropology – BA joint major, joint honors, MA, PhD, co-op</td>
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<td>Sociology or Anthropology and Art and Culture Studies – BA joint major</td>
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<td>Sociology and/or Anthropology and Women’s Studies – BA joint major</td>
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<tr>
<td>Spanish Language Proficiency – certificate</td>
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<td>Spatial Information Systems – certificate</td>
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<td>Special Education – diploma</td>
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<td>Specialist MBA – MBA</td>
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<td>Statistics – BA, minor, extended minor, honors, BSc, minor, honors, MSc, PhD, co-op</td>
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<td>Teaching English as a Second Language – diploma</td>
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<td>Teaching English as a Second/Foreign Language – MED</td>
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<td>Teaching ESL Linguistics – certificate</td>
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<td>TechOne – lower division Simon Fraser University Surrey courses</td>
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<td>Theatre – BFA, extended minor</td>
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<tr>
<td>Undergraduate Semester in Dialogue</td>
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<tr>
<td>Urban Studies – MUR, certificate, graduate diploma</td>
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<tr>
<td>Visual Art – BFA, extended minor</td>
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<tr>
<td>Women’s Studies – BA, minor, extended minor, MA, PhD, co-op</td>
<td></td>
</tr>
</tbody>
</table>
2006 Fall Semester

September
1 Fri Last day for continuing graduate students to register and pay fees.
4 Mon LABOUR DAY. Offices closed.
5 Tues Classes commence.
11 Mon Deadline for submission of undergraduate grade changes from 2005 summer semester, summer session and intersession.
12 Mon Deadline for undergraduate applications for reactivation to the fall semester.
19 Tues Last day for graduate students to register late, and to add courses.
29 Fri Last day for receipt of grades deferred from previous semester for graduate students.

October
2 Mon Deadline for application for undergraduate admission or readmission to the spring semester 2006.
5 Thurs Fall convocation.
6 Fri Fall convocation.
9 Mon THANKSGIVING DAY. All classes cancelled. Offices closed.
10 Tues Last day for undergraduates to drop courses except under special procedures applicable in extenuating circumstances.
20 Fri Deadline for submission of undergraduate application for graduation without a late fee for students completing requirements by the end of the 2006 fall semester.

November
7 Tues Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.
11 Sat REMEMBRANCE DAY.
13 Mon In lieu of Remembrance Day, all classes cancelled, offices closed.
28 Tues Last day for graduate students to drop courses under special procedures applicable in extenuating circumstances.
29 Wed Last day for undergraduates to drop courses under special procedures applicable in extenuating circumstances.

December
4 Mon Classes end.
6 Wed Examination period for undergraduates begins.
14 Thurs Deadline for submission of all graduate degree requirements, including completion of MA Field Examinations and submission of graduate theses to the library.
15 Fri Final deadline for submission of undergraduate application for graduation (with a late fee) for students completing requirements by the end of the 2006 fall semester.
16 Sat Examination period for undergraduates ends.
22 Fri Grades available on goSFU, as they are received (approximately seven working days after the final examination).
25 Mon CHRISTMAS DAY. Offices closed.
26 Tues BOXING DAY. Offices closed.

2007 Spring Semester

January
1 Mon NEW YEAR’S DAY. Offices closed.
5 Fri Last day for continuing graduate students to register and pay fees.
8 Mon Classes commence.
12 Fri Deadline for undergraduate applications for reactivation to the spring semester.
15 Mon Deadline for submission of application to the professional development program for fall semester, 2007.
16 Mon Deadline for submission of graduate student application to graduate for students completing requirements by the end of the fall 2006 semester.
22 Mon Last day for graduate students to register late, and to add courses.
31 Wed Last day for receipt of grades deferred from previous semester for graduate students.
31 Wed Deadline for application for undergraduate admission or readmission to the summer semester, intersession.

February
9 Fri Last day for undergraduates to drop courses except under special procedures applicable in extenuating circumstances.
23 Fri Deadline for submission of undergraduate application for graduation without a late fee, for students completing requirements by the end of the 2007 spring semester.
26 Wed Deadline for application for BC, Canadian and US grade 12 Early Admission students to the 2007 fall semester.

March
12 Mon Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.

April
2 Mon Last day for graduate students to drop courses under special procedures applicable in extenuating circumstances.

May
4 Fri Last day for continuing graduate students to register and pay fees.
7 Mon Summer semester and intersession classes commence.
15 Tues Deadline for submission of application to the professional development program for spring semester 2008.
21 Mon VICTORIA DAY. All classes cancelled. Offices closed.
22 Tues Last day for graduate students to register late, and to add courses.
23 Wed Last day for undergraduates to drop courses with no notation on transcript.
31 Thurs Last day for students completing degree requirements in spring to cancel undergraduate admission or readmission to the fall semester 2007.

June
6 Wed Spring convocation.
7 Thurs Spring convocation.
8 Fri Spring convocation.
11 Mon Last day for undergraduates to drop summer semester courses except under special procedures applicable in extenuating circumstances.
15 Fri Intersession classes end.
18 Mon Last day for undergraduates to drop intersession courses under special procedures applicable in extenuating circumstances.
22 Fri Last day of intersession.
22 Fri Deadline for submission of undergraduate application for graduation without a late fee for students completing requirements by the end of the 2007 summer semester.
25 Mon Summer session classes for undergraduates commence.

July

2 Mon CANADA DAY. All classes cancelled. Offices closed.
9 Mon Last day for graduate students to drop courses without academic penalty except under special procedures applicable in extenuating circumstances.
11 Wed Last day for undergraduates to drop summer session courses except under extenuating circumstances.

August

3 Fri Summer semester classes end.
6 Mon Summer session classes for undergraduates end.
7 Tues Summer semester and summer session examination period for undergraduates begins.

30 Mon Last day for graduate students to drop summer semester courses under special procedures applicable in extenuating circumstances.
31 Tues Last day for undergraduates to drop summer semester courses 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>2006 Fall Semester</strong></td>
<td><strong>2007 Spring Semester</strong></td>
<td><strong>2007 Summer Semester</strong></td>
</tr>
<tr>
<td>week 1 Tuesday, September 5</td>
<td>week 1 Monday, January 8</td>
<td>week 1 Monday, May 7</td>
</tr>
<tr>
<td>week 2 Tuesday, September 12</td>
<td>week 2 Monday, January 15</td>
<td>week 2 Monday, May 14</td>
</tr>
<tr>
<td>week 3 Tuesday, September 19</td>
<td>week 3 Monday, January 22</td>
<td>week 3 Tuesday, May 22</td>
</tr>
<tr>
<td>week 4 Tuesday, September 26</td>
<td>week 4 Monday, January 29</td>
<td>week 4 Tuesday, May 29</td>
</tr>
<tr>
<td>week 5 Tuesday, October 3</td>
<td>week 5 Monday, February 5</td>
<td>week 5 Tuesday, June 5</td>
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<tr>
<td>week 6 Wednesday, October 11</td>
<td>week 6 Monday, February 12</td>
<td>week 6 Tuesday, June 12</td>
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<tr>
<td>week 7 Wednesday, October 18</td>
<td>week 7 Monday, February 19</td>
<td>week 7 Tuesday, June 19</td>
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<tr>
<td>week 8 Wednesday, October 25</td>
<td>week 8 Monday, February 26</td>
<td>week 8 Tuesday, June 26</td>
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<tr>
<td>week 9 Wednesday, November 1</td>
<td>week 9 Monday, March 5</td>
<td>week 9 Wednesday, July 4</td>
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<tr>
<td>week 10 Wednesday, November 8</td>
<td>week 10 Monday, March 12</td>
<td>week 10 Wednesday, July 11</td>
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<tr>
<td>week 11 Thursday, November 16</td>
<td>week 11 Monday, March 19</td>
<td>week 11 Wednesday, July 18</td>
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<tr>
<td>week 12 Thursday, November 23</td>
<td>week 12 Monday, March 26</td>
<td>week 12 Wednesday, July 25</td>
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<tr>
<td>week 13 Thursday, November 30</td>
<td>week 13 Monday, April 2</td>
<td>week 13 Wednesday, August 1</td>
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</tbody>
</table>

Significant Future Dates

(tentative at time of printing)

**2007 Fall Semester**
Tuesday, September 4 – classes commence
Wednesday, October 4 – fall convocation
Friday, October 5 – fall convocation
Monday, December 3 – classes end
Saturday, December 15 – examination period ends

**2008 Spring Semester**
Monday, January 7 – Classes commence
Friday, March 30 – classes end
Saturday, April 19 – examination period ends

**2008 Summer Semester**
Monday, May 5 – Classes commence
Wednesday, June 4 – spring convocation
Thursday, June 5 – spring convocation
Friday, June 6 – spring convocation
Tuesday, August 5 – classes end
Tuesday, August 19 – examination period ends
Undergraduate Studies
Admission and Readmission

Associate Director, Enrollment Management
K. Heber BA (S Fraser)
Associate Director, Admissions
D. Moore BA (S Fraser)
Associate Director, Recruitment Services
P. Godman BA (S Fraser)
Manager, International Recruitment
A. Christopher BSc (Dalhousie), MA (Br Col)

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

Student Recruiters
T. Frost BA (S Fraser)
G. Gawenda BA (S Fraser)
M. Grant BScPh (Br Col)
S. Greaves BA (Trent)
M. Guno BA, MA (S Fraser)
S. Lim BA (Aleneo), MBA (S Fraser)
L. Thompson
L. Walker BA (S Fraser)

International Student Recruiters
S. Ali BA (S Fraser)
C. Brown BA (S Fraser)

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 register in courses for academic credit.

Readmission information is given later in this section. Direct all admission related enquiries to Director of Student Recruitment and Admissions, Student Services, Simon Fraser University, Burnaby, BC, V5A 1S6, 604.291.3224 Tel, 604.291.4969 Fax, http://students.sfu.ca

An advising service is available for potential applicants. Call 604.291.3397 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, registration 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 semesters following the semester to which application 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.

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 30).

• students who have not registered in courses at the University during the previous three semesters; 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 completed all of their degree or diploma programs at the University but who fit into any of the following categories must apply for readmission or reactivation (see "Reactivation and Readmission" on page 30).

Applications for admission will be retained for three years. The documents which students supply to support applications for admission will be returned to the applicant if requested at the time of application.

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 semester, 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. BC 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 not be returned. Irreplaceable documents will be returned to the applicant if requested at the time of application.

Official translations, certified by an educational or embassy official, or made by a certified translator are

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Simon Fraser University 2006 • 2007 Calendar
required for records not in English or French. For applicants residing in BC, translations should be completed by the Society of Translators and Interpreters of BC (www.stibc.org), or M SO AICT Translation Services at www.mosaic-trans.com. Applications and any available documents should be submitted as early as possible but not more than 12 months before the first semester. The deadlines for receipt of applications and documents are given below and in the Academic Calendar of Events (page 12). Applications received after the published deadline may be evaluated selectively at the discretion of the director of admissions.

**English Language Requirements**

Applicants whose primary language is not English must take a standardized English test (see “English Language Requirement” on page 19) and have the results submitted directly from the testing agency to Simon Fraser University. In some circumstances, this will apply to students who have attended secondary schools or post-secondary institutions in Canada. All applicants must also meet English literacy and quantitative skills requirements. See “Literacy and Quantitative Skills Requirements” on page 21.

**Application Deadlines**

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<th>Application Deadline</th>
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<td>Spring 2007</td>
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<tr>
<td>Summer Session 2007</td>
<td>January 31, 2007</td>
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<td>Fall 2007</td>
<td>April 30, 2007</td>
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<tr>
<td>Spring 2008</td>
<td>October 1, 2007</td>
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<tr>
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<td>January 31, 2008</td>
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<tr>
<td>Intersession 2008</td>
<td>January 31, 2008</td>
</tr>
<tr>
<td>Summer Session 2008</td>
<td>January 31, 2008</td>
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</tbody>
</table>

**Application Fee**

**Level 1**

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.

**Level 2**

A $100 application fee is required for all applicants whose academic records, in whole or in part, originate outside of British Columbia. (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.) This fee is non-refundable and not applicable to tuition fees.

**Offers of Admission**

Admission offers are valid only for one semester. Applicants who are admitted but do not register in classes, or who register but withdraw from classes before or during their first semester, must apply again if they wish to attend a subsequent semester.

**Transfer Credit**

Transfer credit hours are granted on admission on the basis of work at another recognized institution; transfer credit hours reduce the total required credit hours for a Simon Fraser University degree, diploma, or certificate. Transfer credit should not be confused with advanced standing. Transfer credit is often given without any concomitant advanced standing; the reverse may also be true.

**Regulations**

In most cases, total transfer and course challenge credit may not exceed 60 credit hours, and may not include more than 15 as upper division work. Within these limits, credit hours 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 registration must be passed with a grade of C (2.0 or 60%) or higher to receive transfer credit; and
- students wishing to complete transfer credit after initial registration must obtain permission in advance, using the form available from Student Services or http://students.sfu.ca.

Please see “Registration/Enrolment” on page 31 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 education, bachelor of applied science in engineering science, honors degree programs and to students attending other universities on formal exchange programs. Refer to the “Faculty of Arts and Social Sciences” on page 128, “Faculty of Education” on page 194, “Faculty of Applied Sciences” on page 108 and “Study Abroad” on page 456.

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 he/she chooses to major or minor. If a student wishes to place to a certain level in a subject area or program. This placement is not necessarily correct for a student who remains within a field of study, it will not necessarily be correct for a student who changes fields.

Transfer credit is designated as type one, two, or three. Type one is assigned credit, used for a Simon Fraser University equivalent. Type two is unassigned credit, used in a subject area, used for courses without a Simon Fraser University equivalent, but which are acceptable to a department as fulfilling subject requirements for a general or honors degree in that department. For example, BISC 1XX 3 means that three credit hours in Biological Sciences have been granted. Type three is general elective credit, used for courses which are judged to be transferable but do not fulfill specific faculty departmental requirements. General elective credit is counted toward the total required for the degree. Individual faculties may restrict the amount of general elective credit that may be counted toward a degree in that faculty.

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 post baccalaureate diploma or a further undergraduate degree must obtain program approval from their faculty or department prior to registering.

**Enrolment Limitations**

Examples of recent enrolment limits and resulting admission cut-offs for average follow.

<table>
<thead>
<tr>
<th>Fall Semester 2006</th>
<th>Basis of Admission</th>
<th>Limit</th>
<th>Resulting Minimum</th>
<th>Faculty of Arts and Social Sciences Acceptance Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC and Canadian grade 12 graduation</td>
<td>2760</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BC college transfer</td>
<td>835</td>
<td>2.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>degree holders and transfers from universities</td>
<td>455</td>
<td>2.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>170</td>
<td>n/a</td>
<td></td>
<td></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 the applicant admission to a program that he or she 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 register in courses, and in a subsequent semester, may seek entry to either the BBA or BSc, or may complete a BA in the Faculty of Arts and Social Sciences.
All Applicants

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 semester (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 Requirement

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 a command of English sufficient to meet the demands of classroom instruction, written assignments and participation in tutorials and discussions.

The University will take into account the following factors in assessing an applicant's facility in the English language.

• the primary language of the applicant (the language ordinarily spoken in the home and in the workplace)
• the duration of residency in an environment in which English is the predominant language
• the duration of study and the language of instruction in any secondary and post-secondary educational institutions
• the results obtained in any academic secondary and/or post-secondary courses in which a high standard of English is required.

Applicants will be deemed to have satisfied the English language requirement if they

• achieve an interim or final grade of 80% or higher on a senior secondary school (grade 12) English or English literature course in a Canadian province other than Quebec; or
• achieve a final grade of B or better on a post secondary course taken at a BC institution which transfers to Simon Fraser University as three or more English credit hours; or
• graduate from a bachelor’s or higher degree program at a recognized university in which the language of instruction and examination is English; or
• have resided for at least four years in an English speaking environment

Applicants who consider English their primary language may submit an exemption form available from Student Services at http://students.sfu.ca

Required English Tests

Applicants who, in the opinion of the University, do not have sufficient experience or skills in English will be required to achieve a satisfactory score on one of the following tests.

• IELTS (International English Language Testing System) with a minimum score of 6.5 on the Academic Modules; or
• IELTS (International English Language Testing System) with an overall score of 5.5 with no individual score below 5 on the Academic Modules, and satisfactory completion of the SFU English Bridge Program; or
• 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
• 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
• TOEFL CBT with a minimum score of 220; or
• TOEFL iBT with a minimum score of 79 (no minimum in any sub-test) and satisfactory completion of our English Bridge Program; or
• TOEFL CBT with a minimum score of 207 and satisfactory completion of our English Bridge Program.

Test scores must be sent directly from the respective testing agency to Simon Fraser University.

English Bridge Program

This ten week intensive English program is offered by Simon Fraser University's Language Training Institute in the Faculty of Arts and Social Sciences, on the main Burnaby campus. Emphasizing the English language skills needed in the academic setting, the program is designed for students who are otherwise fully admissible to the University but who do not completely meet the English language requirements. For applicants who are given conditional university admission, successful completion of the English Bridge Program leads to automatic admission to an undergraduate program in the following semester.

For more information, contact SFU International: fax 604.291.5880; sfu_international@sfu.ca; www.sfu.ca/international

Diverse Qualifications Admission Policy

Each semester, many more admission applications are received than can be accepted. Academic performance is the main criterion for admission and is used exclusively in 90% of cases. However, it is recognized that some candidates have other attributes and achievements which should be considered in determining admission. The University seeks to admit not only applicants who are academically very well qualified but also those who meet minimum admission standards and have

• demonstrated commitment and/or excellence in other endeavours, or
• presented a clear and valid reason for attending the University, or
• succeeded in their studies in spite of difficult circumstances.

The University will select up to 10% of new students, taking into account these diverse qualifications. To be considered for admission under this policy, complete a personal information profile (see “Personal Information Profile” below) and submit it with one letter of reference.

This admission policy is not available to Faculty of Science applicants.

This policy applies only to candidates who meet the published minimum academic admission requirements, the English language requirement, and the literacy and quantitative skills requirements.

Personal Information Profile

To complete your personal information profile, visit http://students.sfu.ca/adm/dg.html and follow the directions.

Students with Disabilities

Academically qualified students who have a physical, mental health, sensory or specific learning disability are encouraged to attend Simon Fraser University. The University will ensure that applicants are not denied admission as a result of their disability and that, where appropriate, accommodation will be made with respect to admission criteria. Prospective students with a disability are encouraged to contact the Centre for Students with Disabilities at 604.291.3112.

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. For information about programs currently available, see “Integrated Studies Program” on page 130.
### 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 23)

Several special categories of admission also exist for British Columbia applicants (see "Special Categories" on page 22).

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

All applicants (except as noted) must graduate from secondary school before entering Simon Fraser University. Students may apply for general admission (Faculty of Arts and Social Sciences requirements) or for direct entry to many programs as shown in the chart below. Applicants must have:
- one course from list 1
- two from list 2
- two further courses from list 2 or 3 (see chart below)

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, i.e. applicants may not choose to not write the examination.

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

<table>
<thead>
<tr>
<th>Academic Program and Faculty</th>
<th>Grade 11 requirements Not used to calculate admission average</th>
<th>Grade 12 requirements Admission average calculated on five best courses as specified below</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication Faculty of Applied Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11 (or applications of mathematics 12) with 60% minimum&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- one math course with 60% minimum&lt;sup&gt;1&lt;/sup&gt; or one science course&lt;br&gt;- one social science or humanities course&lt;br&gt;- two additional courses; if both are from list 3 they must be from different groups</td>
</tr>
<tr>
<td><strong>Computing Science Geographic Information Science General Studies Faculty of Applied Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- one math course with 60% minimum&lt;sup&gt;1&lt;/sup&gt; or one biology 12, chemistry 12, or principles of physics 12&lt;br&gt;- one additional math, science, or social science course&lt;br&gt;- one additional course if both courses are from list 3 they must be from different groups</td>
</tr>
<tr>
<td><strong>Engineering Science Faculty of Applied Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- chemistry 11&lt;br&gt;- principles of physics 11</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- principles of mathematics 12 with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- chemistry 12&lt;br&gt;- principles of physics 12&lt;br&gt;- one additional course</td>
</tr>
<tr>
<td><strong>Kinesiology Faculty of Applied Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- chemistry 11&lt;br&gt;- principles of physics 11</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- one math course with 60% minimum&lt;sup&gt;1&lt;/sup&gt; or one biology 12, chemistry 12 or principles of physics 12&lt;br&gt;- two of biology 12, chemistry 12 or principles of physics 12&lt;br&gt;- one additional course</td>
</tr>
<tr>
<td><strong>Interactive Arts and Technology TechOne Faculty of Applied Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- principles of mathematics 12 with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- one science course&lt;br&gt;- two additional courses; if both are from list 3 they must be from different groups</td>
</tr>
<tr>
<td><strong>All programs&lt;sup&gt;5&lt;/sup&gt; in the Faculty of Arts and Social Sciences</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11 (or applications of mathematics 12) with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- two courses&lt;br&gt;- two additional courses (if both are from list 3 they must be from different groups)</td>
</tr>
<tr>
<td><strong>All programs in the Faculty of Business Administration</strong></td>
<td>- English 11 or François première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- principles of mathematics 12 with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- one additional course&lt;br&gt;- two additional courses (if both are from list 3 they must be from different groups)</td>
</tr>
<tr>
<td><strong>Faculty of Education</strong></td>
<td>Entry is restricted to those who have at least 76 credit hours and are selected for entry to the Professional Development Program (PDP), or who have a first degree and are approved for entry to PDP or to another program in the Faculty of Education.</td>
<td></td>
</tr>
<tr>
<td><strong>BA in the Faculty of Health Sciences</strong></td>
<td>- English 11 or François première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11 (or applications of mathematics 12) with 60% minimum&lt;br&gt;- science 11&lt;sup&gt;4&lt;/sup&gt;</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- one math course with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- one additional course&lt;br&gt;- two additional courses; if both are from list 3 they must be from different groups</td>
</tr>
<tr>
<td><strong>All programs in the Faculty of Science</strong></td>
<td>- English 11 or Français première langue 11&lt;br&gt;- language 11&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- principles of mathematics 11&lt;br&gt;- chemistry 11&lt;br&gt;- principles of physics 11</td>
<td>- one course with 60% minimum&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;- principles of mathematics 12 with 60% minimum&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;- two of biology 12, chemistry 12, geography 12, geology 12, principles of physics 12&lt;br&gt;- one additional course</td>
</tr>
</tbody>
</table>
BC and Yukon grade 11 and 12 course requirements

<table>
<thead>
<tr>
<th>Course Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List 1</strong></td>
</tr>
<tr>
<td>Mathematics Group: principles of mathematics 12, AP calculus AB/BC 12, AP statistics 12, IB mathematics with calculus A/B</td>
</tr>
<tr>
<td>Humanities Group: English literature 12, Français communication et littérature 12, AP Spanish literature 12, AP French 12, AP history 12</td>
</tr>
<tr>
<td>Sciences Group: biology 12, chemistry 12, geology 12, principles of physics 12, AP computer science A/AB 12, AP environmental science 12, IB computer science studies 12, IB environmental systems 12</td>
</tr>
<tr>
<td>Social Sciences Group: geography 12, history 12</td>
</tr>
</tbody>
</table>

| **List 2** |
| Fine and Performing Arts Group: art foundations 12, choreal music 12 (concert band, guitar, jazz band, orchestral strings), music: composition and technology 12, studio arts 12 (ceramics and sculpture, drawing and painting, fabric and fibre, print-making and graphic design), theatre performance 12 (acting, directing, and script development), theatre production 12 (technical theatre, theatre management), visual arts: media arts 12, writing 12 |
| Humanities Group: comparative civilizations 12, IB theory of knowledge (philosophy) 12, Languages: Arabic 12, French 12 or 12A, or Français langue seconde 12, German 12, Italian 12, Japanese 12, Korean 12, Latin 12, Mandarin 12, Okanagan 12, Punjabi 12, Russian 12, Secwepemctsin 12, Spanish 12, Upper St’at’imcets 12, Français Premiere langue 12 (if English 12 has also been taken) |
| Sciences Group: calculus 12, forests 12, information and communications technology 12 (applied digital communications, computer information systems, computer programming, digital media development, modular service course) |
| Social Sciences Group: BC First Nations 12, economics 12, law 12, AP comparative government and politics 12, AP psychology 12, AP US government and politics 12, IB business and organization 12, IB psychology 12, IB social anthropology 12 |

**Literacy and Quantitative Skills Requirements**

**Literacy**

In addition to the English Language requirement, if applicable, students seeking entry to degree programs must meet one of the following.

- 80% or better in English 12; or
- 70 to 79% in English 12 and a Language Proficiency Index (LPI) test score of 4 on the essay component, with a minimum score of 60% on each of parts 1, 2, and 3; or
- 60 to 69% in English 12 and an LPI score of 5 on the essay component and a minimum score of 60% on each of parts 1, 2, and 3; or
- 60 to 69% in English 12 and a Language Proficiency Index (LPI) test score of 4 on the essay component, with a minimum score of 60% on each of parts 1, 2, and 3, and completion with a C grade or higher of the Foundations of Academic Literacy (FAL X99-4) course once at Simon Fraser University.

For details on the LPI, see www.ares.ubc.ca/LPI.

Applicants who are residents of British Columbia must submit LPI scores before they will be admitted. Non-residents may take this exam during their first semester at Simon Fraser University.

**Quantitative and Analytical Skills**

Simon Fraser University degree programs require specific high school math courses for admission (see the course requirements table above).

- 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 a score 70% or higher in a Diagnostic Quantitative Skills Test taken within their first semester at Simon Fraser.
- alternatively (or if they score less than 70% in the Diagnostic Quantitative Skills Test) they must achieve at least a C grade in Foundations of Academic Numeracy (FAN X99-4) course taken within your first 30 credit hours at Simon Fraser University.

For details on the LPI, see www.ares.ubc.ca/LPI.

Applicants who are residents of British Columbia must submit LPI scores before they will be admitted. Non-residents may take this exam during their first semester at 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.

**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 29.

**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 credits) at grade 11 or advanced level to include English, mathematics, social studies or First Nations 12, an experimental or laboratory science; a language other than English is not required
- four courses (16 credits) 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.

Entry requirements to business administration, computing science, engineering science, kinesiology, TechOne, BA Health Sciences, and the Faculty of Science 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...
Admission from BC and Yukon Community and University Colleges

BC community college students may apply for entry to a number of academic programs. Applicants to degree programs must meet the literacy and quantitative skills requirements (see “Literacy and Quantitative Skills Requirements” on page 22).

Applicants who meet 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 30 semester hours of transfer credit. However, they will not be admitted if they present three or more transferable courses equal to nine or more credit hours 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 one full year (30 credit hours) of transferable work with a minimum average of 2.00 or 60%. Up to 60 credit hours of transfer credit will be awarded for acceptable passed courses.

Business Administration, Faculty of

Students planning to enter a BBA degree program must meet the same requirement as those given for the Faculty of Arts and Social Sciences, except that the equivalencies of the following courses must be passed with a C- grade or higher:

- BUEC 232-3
- BUS 251-3, BUS 272-3
- ECON 103-3, ECON 105-3
- MATH 157-3 (or MATH 151-3 or MATH 154-3) and two of ENGL 101-3, 102-3, 103-3, 104-3, 105-3, 199-3, PHIL 001-3, 100-3, 120-3.

Admission is highly competitive. Most transfer students enter the 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 30 credit hours of transferable credit including seven courses that receive the following transfer credit:

- PHIL 100 or 120 or three credit hours in English
- two of MACM 101, 201 MATH 151, 152 and 232
- two of CMPT 125, 126, 150, 225, 250 and 275
- three credit hours in biological sciences, chemistry, earth sciences, kinesiology or physics
- three credit hours 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 BASc degree program must complete at least 30 credit hours in transferable science or engineering courses. Admission is competitive.

Interactive Arts and Technology, School of

Interested BC community college students should see www.surrey.sfu.ca and follow the links for transfer students.

Kinesiology, School of

Students planning to enter the BSc (Kinesiology) degree program must complete at least 30 semester hours of transferable credit. Admission is competitive.

Applicants are selected based on an admission GPA calculated over the courses required to receive transfer credit as 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 route (see “Internal Transfer” on page 124).

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 121-3 or 126-3 or 141-4)
PHYS 130-2, (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 courses that receive the following transfer credit (minimum grade of C- on each):

- Math 100
- two of BIOL 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.bccat.bc.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 semester 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 credit hours, additional general elective credit will be assigned to bring the transfer credit total to 60 hours.

This policy is extended to graduates with an Associate degree from the Institute of Indigenous Government who apply to Simon Fraser University.

Literacy and Quantitative Skills Requirements

This requirement applies to applicants seeking entry to degree programs. Students with fewer than 30 credit hours of transferable credit must meet the same minimum literacy and quantitative standards as students entering from BC or Yukon secondary schools (see page 21).

Students with 30 credit hours or more of transferable work must meet the following requirements.

Literacy

Students transferring from a BC or Yukon community or university college must either:

- fulfill the requirements for direct admission from BC or Yukon secondary schools; or
- obtain a grade of C- or better in a certified W (writing intensive) course that is transferable to Simon Fraser University; or
- obtain a C- or better grade in a course (three credit hours or more) that transfers to Simon Fraser University as English (ENGL) transfer credit.

Quantitative and Analytical Skills

Students transferring from a BC or Yukon community or university college must either:

- fulfill the math requirements of students who are admitted directly from high school for the program of admission; or
- obtain a grade of C- or better in a transferable course that is certified Q by Simon Fraser University and transfers as a Q course at Simon Fraser University.

Simon Fraser University 2006 • 2007 Calendar
BC University Transfer
Applicants in good standing at other recognized universities may be admitted on completion of at least one full year (30 credit hours) of transferable work with a minimum 60% (2.0) average. Other requirements are the same as those for students transferring from a BC or Yukon community or university college. The following conditions apply:

- students must meet the same literacy and quantitative skills competency requirements as described above (see "Literacy and Quantitative Skills Requirements" on page 22)
- 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 credit hours) or more of transferable work, with at least a 3.00 GPA.
- Simon Fraser University supports the 'Pan-Canadian Protocol' on transferability of first and second year courses from any recognized Canadian university

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

Visiting Students
Students of other 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 registration priority is awarded to visiting students.

BC University Degree Holders
Applicants holding degrees 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.

Literacy and Quantitative and Analytical Skill Requirements
Applicants to a degree program must fulfill the same requirements as applicants from BC and Yukon community colleges (page 22).

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 and at least one letter of reference (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 credit hours), and ensured that they have no background deficiencies in essay writing, mathematics, etc. will receive preference.

Applicants for degree programs are expected to meet the literacy and quantitative and analytical skills competency requirements specified for transfer students (see “Literacy and Quantitative Skills Requirements” on page 22). Applicants who have attempted a year or more of transferable post-secondary work (i.e. 30 credit hours or more) 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 semester, with a maximum of two courses in the semester. 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/adm/concurrent.html. Applications should be supported by a brief letter indicating what courses the student is interested in taking and what their academic goals are (upcoming course offerings are available at http://go.sfu.ca), 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 registration priority. They may take no more than eight credit hours per semester to a maximum of 16 in total. Eligibility to re-register after each semester is subject to the approval of the Faculty of Education. For further information, contact the Faculty of Education at 604.291.5830.
### Applicants from Other Canadian Provinces

Canadian applicants may be admitted from:
- secondary school (see below)
- college or university (see "Applicants from Canadian Colleges/CEGEP" on page 25)

BC applicants should see "British Columbia and Yukon Applicants" on page 20.

Information concerning the International Baccalaureate Program and the Advanced Placement program can be found on page 29.

#### Canadian High School Requirements

All applicants must be pursuing studies leading to high school graduation. Graduation is required prior to the start of the student's first semester. The following table will help to determine the high school courses required for admission for applicants from all Canadian provinces except British Columbia. All applicants must have:

- one course from list 1
- two courses from list 2
- two further courses from list 2 or 3 (see chart below)
- one grade 11 academic mathematics course with 60% minimum (not used to calculate admissions average) (e.g. Alberta: Math 20 or APPL Math 30; Manitoba: Pre Calculus 30S or APPL Math 40S; New Brunswick: Math 111 or 112; Newfoundland: Math 2204 or 2205; Nova Scotia: Math 11 or Advanced Math 11; Ontario: MCF3M or MCR3U; Prince Edward Island: Math S21A or S21B; Saskatchewan: Math 20)

### Admission requirements, Faculty of Arts and Social Sciences

Admission average calculated on five grade 12 or equivalent courses: one course from List 1, two from List 2, two further courses from List 2 or 3.

<table>
<thead>
<tr>
<th>Province</th>
<th>List 1 (60% minimum) includes AP and IB acceptable courses</th>
<th>List 2 see AP and IB transfer credit tables for acceptable courses</th>
<th>List 3 see AP and IB transfer credit tables for acceptable courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta, Nunavut,</td>
<td>English, Français</td>
<td>biology, chemistry, world geography, world history,</td>
<td>art 31, art (general), general music, drama, social studies,</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>all courses are 30 unless indicated</td>
<td>mathematics 31, pure mathematics, physics, science, social</td>
<td>languages 30/31, cultural and physical anthropology, philosophies of man, international politics, experimental sociology</td>
</tr>
<tr>
<td>Manitoba</td>
<td>English, language, English and English language and</td>
<td>biology, chemistry, English or French courses not used in List 1,</td>
<td>economics, law, computer science, languages, western civilization,</td>
</tr>
<tr>
<td></td>
<td>transactional forms, English, comprehensive focus</td>
<td>world geography: a human perspective, world issues, advanced</td>
<td>physical science, drama, music, psychology 41G, art</td>
</tr>
<tr>
<td></td>
<td>Français</td>
<td>advanced mathematics, pre-calculus mathematics, introduction to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>calculus 455, statistics and probability 455, physics, western</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>civilization history, calculus 42S</td>
<td></td>
</tr>
<tr>
<td>New Brunswick</td>
<td>English, Français</td>
<td>biology, chemistry 121/2, Canadian literature, environmental</td>
<td>visual arts, music 122, theatre arts, economics, political</td>
</tr>
<tr>
<td></td>
<td>all courses are 120, 121 or 122 unless indicated</td>
<td>science 122, Canadian geography, world issues, Canadian</td>
<td>science, computer science, languages, law, native studies,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>history 121/2, mathematics 121/2, advanced mathematics,</td>
<td>sociology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>calculus, physics 121/2, science 122, trig and 3 space 121/2</td>
<td></td>
</tr>
<tr>
<td>Newfoundland and Labrador</td>
<td>English language 3201, Français 3202</td>
<td>biology, chemistry, thematic literature, literary heritage,</td>
<td>art/design, video/film arts 3220, theatre arts 3220, advanced</td>
</tr>
<tr>
<td></td>
<td>all courses are 3200 – 3205 unless indicated</td>
<td>environmental science, world geography, global issues,</td>
<td>writing 3103, global economics 3103, computer technology,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>geology, world history, mathematics, advanced mathematics,</td>
<td>languages, folk literature, earth systems 3209, applied music</td>
</tr>
<tr>
<td></td>
<td></td>
<td>statistics 3104, physics, world problems</td>
<td>3020, art history, music theory, humanities 3108</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>English, Français</td>
<td>biology, chemistry, Canadian literature, geography, global</td>
<td>art, music, economics, law, political science, computer</td>
</tr>
<tr>
<td></td>
<td>all courses are academic or advanced unless indicated</td>
<td>geography, Canadian geography, history, global history,</td>
<td>related studies, languages, food science, film/video production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mathematics, advanced mathematics, pre-calculus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>mathematics, physics, calculus, African heritage literature</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>core English, core Français</td>
<td>biology, chemistry, studies in literature, Canadian and world</td>
<td>visual arts, dance, music, dramatic arts, the writer's craft,</td>
</tr>
<tr>
<td></td>
<td>all courses are 4U/M</td>
<td>issues: a geographic analysis, world geography: human</td>
<td>analysing current econ issues, environment and resource</td>
</tr>
<tr>
<td></td>
<td></td>
<td>patterns and interaction, Canada: history-identity-culture,</td>
<td>management, Canadian and international law, Canadian and world</td>
</tr>
<tr>
<td></td>
<td></td>
<td>world history: the West and the world, geometry and discrete</td>
<td>politics, aboriginal governance: emerging directions, issues of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mathematics, advanced functions and introductory calculus,</td>
<td>indigenous peoples in a global context, individuals and families</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mathematics of data management, physics</td>
<td>in a diverse society, challenge and change in society, issues in</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>English, Français</td>
<td>biology, chemistry, geography, global studies, history, history</td>
<td>human growth and development, computer engineering, science,</td>
</tr>
<tr>
<td></td>
<td>all courses are 611 or 621</td>
<td>algebra, advanced mathematics, physics, PEI history, mathematics</td>
<td>geomatics, computer science, languages, economy, social science,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>intro economics, advanced politics, individuals in society,</td>
<td>food and nutrition science, communications technology,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>oceanography, animal science, computer studies, music, art,</td>
<td>languages, classical civilization, philosophy: questions and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>drama, languages</td>
<td>theories, independent studies: art history, psychology,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>statistics or calculus</td>
</tr>
<tr>
<td>Quebec (private high school)</td>
<td>English, Français, AP English</td>
<td>at least two additional university preparatory grade 12 courses</td>
<td>arts education, native studies: Canadian studies, social</td>
</tr>
<tr>
<td>for CEGEP requirements,</td>
<td>Language and composition, IB English language A</td>
<td>selected from mathematics, sciences, languages, literature,</td>
<td>studies, languages, computer science, dance, drama, theatre</td>
</tr>
<tr>
<td>see “Applicants from</td>
<td></td>
<td>social sciences, history, geography</td>
<td>arts, visual art, information processing, law, psychology,</td>
</tr>
<tr>
<td>Canadian Colleges/CEGEP”</td>
<td></td>
<td></td>
<td>forestry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>English A and B, Français</td>
<td>biology, chemistry, history: Canadian studies, mathematics</td>
<td>arts education, native studies: Canadian studies, social</td>
</tr>
<tr>
<td></td>
<td>all courses are 30</td>
<td>A, B or C, calculus, physics, geography, geology</td>
<td>studies, languages, computer science, dance, drama, theatre</td>
</tr>
</tbody>
</table>
| Course titles in this chart are those used by your provincial ministry of education; check with your school counsellor if there are discrepancies. Equivalent Programme Français courses are also acceptable.

Programs in the School for the Contemporary Arts have additional requirements such as auditions or portfolio assessments. For further information, see www.sfu.ca/sca/
Admission requirements, Faculty of Arts and Social Sciences

Admission average calculated on five grade 12 or equivalent courses: one course from List 1, two from List 2, two further courses from List 2 or 3.

<table>
<thead>
<tr>
<th>List 1</th>
<th>List 2</th>
<th>List 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Achieve at least a C grade in Foundations of Academic Numeracy (FAN X99-4) course taken within your first semester at Simon Fraser University.</td>
<td>• Score at least 70% in a Diagnostic Quantitative Skills Test taken within your first semester at Simon Fraser University.</td>
<td>• Achieve at least a C grade in Foundations of Academic Literacy (FAL X99-4) course taken within your first 30 credit hours at Simon Fraser University.</td>
</tr>
<tr>
<td>• If you have a grade of 60% to 69% you must score 5 or better on the essay component of the Language Proficiency Index (LPI) test, with a minimum score of 60% on parts 1, 2, and 3. If you have a grade of 70% to 79%, you must score 4 or better on the essay component of the LPI, with a minimum score of 60% on parts 1, 2, and 3. This test may be taken after admission. For details on the LPI, see <a href="http://www.ares.ubc.ca/LPI">www.ares.ubc.ca/LPI</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students who lack the appropriate LPI score will be required to take a Foundations of Academic Literacy (FAL X99-4) course once at Simon Fraser University.

Literacy and Quantitative Skills Requirements

All applicants must meet these requirements as described for BC and Yukon secondary school applicants (see “Literacy and Quantitative Skills Requirements” on page 21).

Non-residents of BC may write the Language Proficiency Index (LPI) exam during their first term at Simon Fraser University.

Faculty/Program Admission Requirements

Admission into many academic programs is highly competitive. Applicants must meet the Faculty of Arts and Social Sciences admission requirements, as shown in the table on page 24, and, as part of those requirements, must have completed the following prerequisite course(s).

Business Administration, Faculty of
• one grade 12 or equivalent mathematics course with 60% minimum

Communication, School of
• one grade 12 or equivalent course in mathematics with 60% minimum or one science course, one social science or humanities course

Computing Science, Geographic Information Science, General Studies (Applied Sciences)
• one grade 12 or equivalent course in mathematics with 60% minimum, one science course, one social science, math or science course

Engineering Science, School of
• one grade 12 or equivalent course in mathematics with 60% minimum, chemistry and physics

Health Sciences (BA)
• one grade 12 or equivalent course in mathematics with 60% minimum

Interactive Arts and Technology and TechOne
• one grade 12 or equivalent course in mathematics with 60% minimum and one science course

Kinesiology, School of
• one grade 12 or equivalent course in mathematics with 60% minimum and at least two of biology, chemistry or physics

Science, Faculty of
• one grade 12 or equivalent course in mathematics with 60% minimum, and at least two of biology, chemistry, physics, geology or geography

Footnote 1
1 If you have a grade of 60 to 69% you must also either:
• score at least 70% in a Diagnostic Quantitative Skills Test taken within your first semester at Simon Fraser University.
• achieve at least a C grade in Foundations of Academic Numeracy (FAN X99-4) course taken within your first 30 credit hours at Simon Fraser University.

Minimum Admission Average

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.

Applicants from Canadian Colleges/CEGEP

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

Applicants who have attended a college in a transfer program articulated with Simon Fraser University must complete at least one full year (30 credit hours) of transferable work with a minimum average of 2.0 or 60%.

Applicants who have attended other community colleges in academic programs must have completed at least one full year (30 credit hours) of transferable work with a minimum average of 2.40 or 65%.

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 credit hours of transfer credit. However, they will not be admitted if they present three or more transferable courses equal to nine or more credit hours with an average of less than 2.0 or 60%.

Up to 60 semester hours of transfer credit will be awarded for acceptable passed courses. Other requirements are parallel to those for BC college transfer students (see “Admission from BC and Yukon Community and University Colleges” on page 22), except that associate degrees are given no special priority.

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

Literacy and Quantitative Skills Requirements

See “Literacy and Quantitative Skills Requirements” on page 22.

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.

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.

Canadian University Transfer

See “BC University Transfer” on page 23.

Canadian University Degree Holders

See “BC University Degree Holders” on page 23.
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.

A partial list of admission requirements for first year entry only follows. Due to enrolment limitations, a high standing (equivalent to 80% or higher) is required for admission. 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.

English Language Requirement
See “English Language Requirement” on page 19.

Literacy and Quantitative Skills Requirements

Literacy
International applicants may satisfy Simon Fraser University’s literacy competency requirement in one of several ways:

- IELTS score of 6.5 or better (academic modules).
- Language Proficiency Index (LPI) test score 5 or better and at least 60% in each of parts 1, 2, and 3. See www.ares.ubc.ca/LPI
- Foundations of Academic Literacy course (FAL X99-4) at Simon Fraser University. This course must be passed with a grade of C or better within the student’s first 45 units of credit. A maximum of two attempts is permitted.

Quantitative Skills
International applicants may meet the Quantitative Skills admission requirement by fulfilling either the BC and Yukon secondary school or college transfer entry standards i.e. an academic mathematics course at the senior high school level with a minimum 60% grade or a transferable university level mathematics or similar course with a C- grade or better.

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 to the student; other irreplaceable documents will be returned by mail or 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 consular 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.

Requirements by Region

Africa
Egypt
Thanaweya A’ama (Secondary School Certificate) with a minimum average of 67%, but normally require 85%.
Kenya
Kenya Certificate of Secondary Education (KCSE) with a minimum average of C+, but normally require B+.
Nigeria
Senior Certificate of Secondary Education (SSCE) with a minimum score of 4 (maximum 1.0), but normally require 2 (maximum 1.0).
South Africa
Senior Certificate with matriculation endorsement and a minimum average of C (60%), but normally a higher grade is required.

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

Brazíl
Certificado de Conclusão do Ensino Médio with a minimum score of 7/10, but normally require 8/10 plus results of Concurso Vestibular (university entrance exam)/ 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 Académica (PAA).

Colombia
First Year completed at a recognized university. Individual consideration is also given to applicants with excellent results in secondary school graduation (Bachillerato) with minimum average of 67% (6.7), but normally require 85% (8.5).

Costa Rica
Bachillerato or Certificado de Conclusión de Estudios Primarios on an academic program with a minimum average of 67%, but normally require 85% plus results of University 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 entrance examination (examen de admisión).

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.

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

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
Secondary School Graduation with a GPA of 3.2 or higher based on a combination of grade 11 and 12 academic courses, test scores (new SAT: minimum score of 1800 on SAT I, or old SAT: V+M = 1200 or ACT ≥ 26 with a minimum writing subscore [essay] of 10). Other factors will be considered, such as rank in class and advanced academic courses (e.g. international baccalaureate, advanced placement program).

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%/B), but normally first division standing (60%–100%/A) is required.

Brunei
Brunei/ Cambridg 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>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>0</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, but normally a First Division/Class Standing is required plus a Statement of Marks with a minimum of 60% (A/60% – 100%).
Indonesia
Surat Tanda Tamat Belajar Sekolah Menengah Umum on an academic program with a minimum score of 7/10, but normally require 8/10 plus results of Ebtians.

Japan
Kotogakko Sotsugyou Shomeisho (Upper Secondary School Leaving Certificate) on an academic program with a minimum grade of 3/5 on academic subjects.

Korea (Republic of)
Immungye Kodung Haakyo Choeupchang (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 live academic subjects, but normally require B (70%).

Pakistan
Intermediate (IC) or Higher School Certificate (HSC) with a minimum overall 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 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.

Graduate Point Values

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

Note: May be admitted on completed junior high school followed by a five-year junior college, provided that an academic program was followed at the junior college and a minimum average of B was achieved on the last two years of the diploma.

Thailand
Mathtoyom 6 (M6) (Secondary School Certificate) with minimum 2/4, but normally require 3/4 plus results of written entrance examinations.

Europe

Cyprus
Apltribution of Lykeion or Lise Diplomasi (High School Graduation)

Czech Republic
Vysevedeni o Maturitni Zkouzce (Maturita) or Maturitni Vysevedeni with a minimum score of 3.5 (maximum 1.0), but normally require 2 (maximum 1.0).

Denmark
Studentereksamen or Højere Forberedeeseseksamen 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 Diplome de Bachelier de l’Enseignement du Second Degré with a minimum score of 12/20 (assez bien), but normally require 14/20 (bien).

Germany
Abitur, Reifezeugnis or Zeugniss der Allgemeinen Hochschulreife with a minimum score of 3.5 (maximum 1.0) in the Abitur, but normally require 2.2 (maximum 1.0).

Greece
Lykeion: Aplytrio Eniaiou Lykeiou with a minimum overall average of 14/20, but normally require 17/20 plus general entrance examination.

Hungary
Erettségi Erettségii Bizonyítvanyt 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
Matura Classica Diploma or Matura 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

Russian Federation
Svidetel’stvo Srednom Obrazovanii (Certificate of Secondary Education) or Attestat O Polnom Srednem Obrazovanii (Upper Secondary Education) with a minimum score of 3/5, 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
Avtlingsbetyg/Slutbetyg (Upper Secondary School Leaving Certificate) with a minimum overall score of 10 points (G) or Pass, but normally require an overall grade of 15 points (VG) or Pass with Distinction.

Switzerland
Maturatszeugnis, Certificat de Maturite, Baccalauréat, 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 Zагаі’nu Sershdui Osivtu (Matriculation Examination) with superior grades or (see Russian Federation).

United Kingdom
General Certificate Examination Advanced Level (A-Level), with a minimum of 18 points (transferable or non-transferable), but normally require 20 points for Arts and Social Sciences and 18 points for Science is required. Other faculty/departments will evaluate on an individual basis. A 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 A</td>
<td>10</td>
<td>E A</td>
</tr>
<tr>
<td>B A</td>
<td>8</td>
<td>O A</td>
</tr>
<tr>
<td>C A</td>
<td>6</td>
<td>F A</td>
</tr>
<tr>
<td>D A</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Middle East

Bahrain
Tawjihiyah (General Secondary School Leaving Certificate) with a minimum overall average of 67% (good) but normally require 84% (very good). Twelve years of academic preparation is required.

Israel
Bagrut/Mechina (Matriculation Certificate) with a minimum score of 7/10, but normally require 8/10.

Iran
Pre-university Year Certificate + Diploma Metevaseth National High School Diploma (after 12 years) a minimum average of 14/20, but normally require 16/20.

Jordan
Tawjiji (General Secondary Education Certificate) with a minimum average of 67%, but normally require 85%.

Kuwait
Shahadat al-thanawia-al-a’ama (General Secondary School Certificate) with a minimum average of 67% (C+), but normally require 85% (B+) or GCE A – Levels (see United Kingdom) or the International Baccalaureate Diploma requirements.

Oman
Shanawiyah (Secondary School Leaving Certificate) —with a minimum average of 75% (minimum pass 70%) but normally require 95% or International Baccalaureate Diploma.

Qatar
Tawjihya (Secondary School Leaving Certificate) with a minimum average of 75% (minimum pass 70%), but normally require 95%.

Turkey
Lise Diplomasi (High School Graduation) with superior grades plus successful completion of the “Student Selection Exam” (OSS). Exam results are provided by the Student Selection and Placement Centre (OSYM).

United Arab Emirates
Tawjihya or Shahadat Al-Thanawiyah Al-‘Arma (Secondary School Certificate) with a minimum average of 67% (good), but normally require 84% (very good) or GCE A-Levels (see United Kingdom).

Oceania
Australia
Year 12 Certificate plus Universities Admission Index (UA) with a minimum C+ standing as defined by the home state university is required.

• Australian Capital Territory (ACT): ACT Year 12 Certificate plus UA
• New South Wales (NSW): Higher School Certificate (HSC) plus UA

Simon Fraser University 2006 • 2007 Calendar
• Northern Territory (NT): Certificate of Education plus university aggregate/ SACE and TER
• Queensland (QLD): Queensland Senior Certificate plus Field Position (FP)
• Tasmania (TAS): Certificate of Education plus UAI.
• Victoria (VIC): Victoria Certificate of Education (VCE) plus ENTER plus study score
• Western Australia (WA): Certificate of Secondary Education (CSE) plus rank
• South Australia (SA): South Australian Certificate of Achievement (SACE) plus TER

New Zealand
National Certificate of Education Achievement (NCEA) levels three and four (minimum of 42 credits on academic programs, including at least eight credits in Level 2 English). Before 2004: Higher School Certificate plus University Entrance, Bursaries and Scholarship Examination.

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 “BC University Transfer” on page 23.

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

Advanced Placement (APP) and International Baccalaureate (IB) courses may be used in place of equivalent provincially-approved grade 12 courses.

The chart on the right shows how APP 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 APP 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 credit hours. 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 admissible on another program leading to a secondary school graduation program, and will be granted transfer credit for those higher level subjects with a grade of 5 or higher.

### Advanced Placement Program Transfer Credit

<table>
<thead>
<tr>
<th>APP Examination</th>
<th>SFU Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art: studio art — drawing portfolio</td>
<td>FPA 1XX (6) Visual Art Studio</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), 102 (4)</td>
</tr>
<tr>
<td>calculus AB</td>
<td>MATH 151 (3)</td>
</tr>
<tr>
<td>calculus BC</td>
<td>MATH 151 (3), 152 (3)</td>
</tr>
<tr>
<td>chemistry</td>
<td>advanced standing in CHEM 120, 122</td>
</tr>
<tr>
<td>computer science A</td>
<td>CMPT 120 (3), CMPT 1XX (3)</td>
</tr>
<tr>
<td>computer science AB</td>
<td>CMPT 120 (3), CMPT 125 (3)</td>
</tr>
<tr>
<td>economics: microeconomics</td>
<td>contact the economics department for a 12 credit hour prerequisite waiver for ECON 103 or ECON 105</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)</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), 102 (4) with a score of 5</td>
</tr>
<tr>
<td>government and politics: United States</td>
<td>POL 100 (3)</td>
</tr>
<tr>
<td>government and politics: United States</td>
<td>POL 232 (3)</td>
</tr>
<tr>
<td>history of art</td>
<td>FPA 167 (3), FPA 1XX (3) Visual Art History</td>
</tr>
<tr>
<td>human geography</td>
<td>GEOG 100 (3)</td>
</tr>
<tr>
<td>Latin literature</td>
<td>HUM 102 (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), 102 (3)</td>
</tr>
<tr>
<td>physics C</td>
<td>PHYS 120 (3), PHYS 121 (3); see note below</td>
</tr>
<tr>
<td>psychology</td>
<td>PSYC 100, 102 (3)</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)</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>

Note: These topics are not covered in APP 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.

### 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), 102 (4)</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), 122 (2)</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), 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), ECON 105 (3)</td>
</tr>
<tr>
<td>English (language A)</td>
<td>HL</td>
<td>ENGL 101 (3), 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), 111 (3)</td>
</tr>
<tr>
<td>history</td>
<td>HL</td>
<td>HIST 225 (3), HIST 1XX (3)</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), ENGL 1XX (3) French Language A = FREN 1XX (3) or 1XX (6) depending on placement test</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), MATH 152 (3), 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), 102 (3)</td>
</tr>
<tr>
<td>psychology</td>
<td>HL</td>
<td>PSYC 100 (3), 102 (3)</td>
</tr>
<tr>
<td>social and cultural anthropology</td>
<td>HL</td>
<td>SA 101 (4), 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 in good academic standing 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 Simon Fraser University; or
- required to withdraw under extenuating circumstances, after the application deadline for the subsequent semester; (unless you
- withdraw under extenuating circumstances, after the application deadline for the subsequent semester); or
- you are a concurrent studies student who completes externally further transferable academic work according to the following schedule (any of the following five options):
  - 12-17 credit hours with a minimum 3.50 GPA
  - 18-23 credit hours with a minimum 3.00 GPA
  - 24-29 credit hours with a minimum 2.75 GPA or with the acceptance GPA (see Acceptance GPA below) whichever is higher
  - 30 or more credit hours with the acceptance GPA (see Acceptance GPA below)
  - a completed 2 year technical diploma with a 70% minimum average and at least 12 credit hours of transferable course work with a minimum 2.75 GPA. (The transferable work may be within the diploma program or supplementary to it.)
- students entering certificate programs 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.

Readmission

The following conditions require that you apply for readmission before registering in further courses:
- completion of further academic studies at a postsecondary institution during the time you were away from Simon Fraser University; or
- voluntary withdrawal from your first semester 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 register in a subsequent semester, (unless you withdraw under extenuating circumstances, after the application deadline for the subsequent semester); 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/ps/admissions.html by the applicable application deadlines.

Holders of Simon Fraser University Bachelor’s Degrees

In addition to submitting an application for readmission, 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. 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 readmission based on performance achieved in external academic course work completed after she/he last registered 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 credit hours with a minimum 3.50 GPA
- 18-23 credit hours with a minimum 3.00 GPA
- 24-29 credit hours with a minimum 2.75 GPA or with the acceptance GPA (see Acceptance GPA below) whichever is higher
- 30 or more credit hours with the acceptance GPA (see Acceptance GPA below)
- a completed 2 year technical diploma with a 70% minimum average and at least 12 credit hours of transferable course work with a minimum 2.75 GPA. (The transferable work may be within the diploma program or supplementary to it.)

Readmission of Students on Extended Withdrawal

A former student on extended withdrawal (EW) shall be eligible for readmission if she/he completes further transferable academic work according to the following schedule (any of the following five options):
- 24-35 credit hours with a minimum 3.50 GPA
- 36-47 credit hours with a minimum 3.00 GPA
- 48-59 credit hours with a minimum 2.75 GPA or with the acceptance GPA (see Acceptance GPA below), whichever is higher
- 60 or more credit hours with the acceptance GPA
- a completed two year technical diploma with a 70% minimum average and at least 24 credit hours of transferable course work with a minimum 2.75 GPA.

Acceptance GPA

The acceptance GPA refers to the minimum admission GPA in effect for that semester 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 credit hour 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 EW) is placed on academic probation (OAP) and shall again be subject to the conditions described above.
Registration is the process of formally assigning and recording student’s enrolment in a course(s). Registration 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 registration (see “Special Audit Student” on page 229).

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 semester, which may be combined. Students are given access to the registration 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 registration 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 semester. For further information see “Continuing Studies” on page 229.

Information about how to enroll and details about the “Continuing Studies” on page 229. For further information see “Continuing Studies” on page 229.

Library/Identification Card
A student library/identity card is provided to registered 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
3200 Maggie Benston Student Services Centre, 604.291.4356 Tel, 604.291.4969 Fax, acadvice@sfu.ca, http://students.sfu.ca, Monday to Thursday 9 am – 6 pm, Friday 10 am – 4:30 pm

Academic Advising 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 Assistance and Awards” on page 42.

Continuing Students
Students who enrolled for one or more of the last three semesters and who are eligible to continue will be advised of registration procedures and deadlines well in advance of each semester.

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 instruction on the procedure to enroll for courses.

Qualifying Student
See “1.3.6 Admission as a Qualifying Student” on page 238.

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 229.

Special Student
A student already holding a first degree may, as a special student, register 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 within the twelve month calendar year.

Semester
The calendar year is divided into three academic terms of 16 weeks each, called ‘semesters.’ Each semester has its own registration and final examinations. All academic courses in this Calendar are one semester long or fall into one of the shorter sessions, such as intersession or summer session. Students may enter at the beginning of any semester and attend one, two or three semesters 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 semester to graduate with a bachelor’s degree at the end of the spring 2008 semester. Semesters are referred to by numbers or by names: Semester 1 – spring, January to April, (2005-1) Semester 2 – summer, May to August, (2005-2) Semester 3 – fall, September to December, (2005-3)

Term codes
The PeopleSoft student administration system used at Simon Fraser University 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:

- 1067 = fall 2006
- 1071 = spring 2007
- 1074 = summer 2007

The codes can be interpreted as follows:

- 1 represents the 21st century
- 05 = 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 progression is expressed in levels. ‘Level’ refers to the status of a student’s program. Each level normally equals one semester’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 credit hours) 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>Credit Hours</th>
<th>Traditional Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lower</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>first year or freshman</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>second year or sophomore</td>
<td></td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>third year or junior</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>fourth year or senior</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>fourth year or senior</td>
<td></td>
</tr>
</tbody>
</table>

Total 120 credit hours
Four Year Honors Degree Program

<table>
<thead>
<tr>
<th>Level</th>
<th>Credit Hours</th>
<th>Traditional Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>15</td>
<td>first year or freshman</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>second year or sophomore</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>third year or junior</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>fourth year or senior</td>
</tr>
<tr>
<td>Upper</td>
<td>5</td>
<td>first year or freshman</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>second year or sophomore</td>
</tr>
<tr>
<td>Levels</td>
<td>7</td>
<td>third year or junior</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>fourth year or senior</td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
<td>credit hours</td>
</tr>
</tbody>
</table>

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 credit hours. ‘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 credit hours.

Undeclared

This category will be used for any student who, prior to the successful completion of the 61st credit hour, has not recorded an intended specialization. Academic advising for undeclared students is available through Student Services.

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 credit hour. Academic advising for approved students is the responsibility of the department offering the approved specialization(s).

Credit Courses

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

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 semester system of the University, with the same 16 week period for course completion.

Course Overloads

No student who is on academic probation may register in a course overload.

In the Faculty of Applied Sciences, approved majors who wish to register 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 hours.

Course Load Values

The following maximum course load values 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 registered for summer session courses only, or intersession courses only and who are not entering their graduating semester is as follows:

- Applied Sciences, Arts and Social Sciences, Business Administration or Science – 18 hours
- Engineering Science – 22 hours (permission of the director is required for course loads below 15 hours).
- Education – 20 hours

Intersession or Summer Session Only

Students enrolling for the intersession or summer session only, may not enrol in programs having a total value in excess of nine credit hours, except where course combinations may require registration in a program of 10 credit hours; however, no student will be permitted to undertake a program of more than 10 credit hours of work.

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 registered 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.

No individual course may be repeated more than once except with the permission of the department offering the course. Students wishing to enroll in a
course for the third or subsequent time should consult an advisor in the department.

**Duplicate Transfer Credit**

Students may not receive transfer credit for a course which is a duplicate of a course passed at Simon Fraser University.

If a student enrolls for a duplicate course, and completes the course with a passing grade, the transfer credit will remain on the academic record as a duplicate, with a zero credit value. If the course is completed with a failing grade, or is dropped, the transfer credit will remain on the academic record. A department may permit credit to count for both a transfer course and a Simon Fraser University course, if the course content is judged to be sufficiently different.

Current limits on course repeats will apply to duplicate transfer courses. The implementation of this policy will not affect the method of calculating grade point averages.

See also “Credit for the Semester” on page 35.

**Courses at Other Institutions/Letters of Permission**

Simon Fraser University students who wish to take academic work at other institutions for credit toward an undergraduate degree, diploma or certificate at this University must obtain permission in advance from their department chair (if a major has been declared) and the dean of their faculty. A form for this purpose may be obtained from Student Services.

When approval has been granted, Student Services will issue a Letter of Permission form to the institution which the student plans to attend, if required by that institution.

Except as noted below, total transfer and course challenge credit hours may not exceed 60 credit hours and not more than 15 credit hours of transfer credit may count toward upper division requirements. Each diploma and certificate program has its own specific limit, and students should consult the appropriate section of this Calendar for such restrictions. Within these limits and limits on repeat of courses and duplicate transfer credit, credit may be transferred for all courses passed with a grade of ‘C’ (2.0 numeric equivalent) for institutions reporting on a letter grade grading basis, or 60% for institutions reporting on a percentage grading basis, or higher, and which are acceptable under Simon Fraser University’s transfer policies. Transfer credit is not used in the calculation of the cumulative grade point average. Students should see “Admission and Readmission” on page 17 for transfer credit information.

For information concerning maximum transfer credit pertaining to Education (EDUC) 401/402, 405, see “Transfer Credit” on page 194.

For students working toward a bachelor of general studies degree, special regulations provide more hours of transfer credit from a degree granting institution recognized by Simon Fraser University. Please see “Transfer” on page 130.

Students who are pursuing a bachelor of applied science degree in engineering science should see “School of Engineering Science” on page 116. 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 credit hours may be obtained by the combined mechanism of course challenge and transfer credit.

A student must be eligible to register in order to register 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 register in one semester 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 semester later.
- the student must complete the course within ten days following the commencement of University classes.
- a student is not entitled to register 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.
- credit hours through course challenge do not count towards semester 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 register 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 registered for challenge. If the student does not satisfactorily complete the course at the advanced level, then formal challenge assessment of the proceeding level(s) should be undertaken to avoid two challenges without success based solely on the advanced assessment.

**Registration for Course Challenge**

Any eligible student who wishes to register 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 register 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.

**Course Audit**

A student who has satisfied the admission requirements of the University may attend a specific course(s) as an auditor upon completion of the necessary registration procedures, which include written approval of the department concerned.

Audit will be recorded as ‘AU’ on a student transcript if the student fulfills the requirements agreed to by the student and the instructor at the time of registration. Minimally, these requirements should comprise regular attendance at class meetings, completion of readings and participation in class activities. Audited courses will not count towards degree requirements. During the normal course change period a student may change registration in course audit from one course to another, or to regular enrolment in the course, or from regular enrolment to course audit. Normally, no further registration in course audit will be permitted after the extended course change period has ended. For information on fees assessed for course audit, see “General Regulations” on page 37.

*Note:* Course audit and special audit are for different categories of students. Those interested in gaining entry as special audit students should see "Special Audit Student" on page 229.

**Program/Course Changes and Withdrawal**

**Program Changes**

Program changes to academic goal, or to honors, major or minor subject declarations or intentions may be entered for necessary departmental approval on the program approval form available from the major department or Student Services.

**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 for which you register. 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.

**Semester Course Changes**

The Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu) that is published each semester contains detailed instruction on the procedures, and semester specific deadline dates to be followed, to change courses during the registration 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 semester Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu).

**Normal Course Change Period**

*Regular Semester – Class Days 1-5*

Courses may be added or dropped or tutorial times changed using the registration 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 challenge from one course to another, or to regular enrolment in the course.

Registration for course audit, course challenge and course changes must be done in person at the department offering the course.

**Extended Course Change Period**

*Regular Semester – Class Days 6-15*

After the fifth day of classes to the 15th day of classes, courses may be added only with special

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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 a course after the semester, 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 Semester – Class Days 16-25

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

After the fifth day of classes 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 semester, are referred to as 'retroactive' and follow the same procedures as above but may take longer to adjudicate.

Note: Excluding 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 semester must follow the same schedule as outlined above in Semester Course Changes. Specific semester dates can be found in the Academic Calendar of Events, and in the Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca/gosfu.ca) mailed each semester 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 semester. The marks obtained for work done at all courses 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.

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 semester lectures for which such standing is requested. Courses for which aegrotat standing is awarded are not included in the GPA calculation.

AU Notation

Audit will be recorded as AU on a student transcript if the student fulfils the requirements agreed to by the student and the department at the time of registration. Minimally, these requirements should comprise regular attendance at class meetings, completion of readings and participation in class activities. Audited courses will not count towards degree requirements.

CC Grades

A student who has 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 semester 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 semester indicating the final disposition for the course challenge in the semester. There is no provision for extension or deferral. 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 semester, 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.

CR Grades

The grade of CR has no numerical equivalent and is not included in the GPA calculation. The CR grade may be assigned in certain special cases.

DE Grades

The DE notation will be given when a physician's certificate or other document substantiating a request for deferment on medical or compassionate grounds is received by the registrar or the chair of the department concerned within four days of the date from which the final examination was to have been written, or when the course instructor wishes to defer submitting a final mark pending completion of further work by the student. The DE notation must be submitted by the instructor with a recommended length of deferral and approved by the chair. All unchanged DE notations will be converted automatically to F after the fifth day of classes of the semester immediately following the one in which the notation was awarded. In exceptional cases, an

Students who miss examinations because of illness or for compassionate reasons are required to obtain a physician's certificate or other supporting documents in order 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.

A student may not rewrite (or write, in the case of receiving an N grade) a paper unless he/she re-enrols 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 semester for each credit course. Each grade will appear on the student's record as a letter grade and numerical equivalent as follows.

<table>
<thead>
<tr>
<th>Letter grade</th>
<th>Definition</th>
<th>Numerical equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Excellent performance</td>
<td>4.33</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>Good performance</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>Satisfactory performance</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>Marginal performance</td>
<td>1.67</td>
</tr>
<tr>
<td>D-</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Unsatisfactory performance (fail)</td>
<td>0.00</td>
</tr>
<tr>
<td>P</td>
<td>Satisfactory performance or better (pass, ungraded)</td>
<td>no equivalent</td>
</tr>
<tr>
<td>CC</td>
<td>Course Challenge</td>
<td>no equivalent</td>
</tr>
<tr>
<td>AE</td>
<td>Aegrotat standing, compassionate pass</td>
<td>no equivalent</td>
</tr>
<tr>
<td>DE</td>
<td>Deferred grade</td>
<td>no equivalent</td>
</tr>
<tr>
<td>FX</td>
<td>Formal exchange</td>
<td>no equivalent</td>
</tr>
<tr>
<td>GN</td>
<td>Grade not reported</td>
<td>no equivalent</td>
</tr>
<tr>
<td>N</td>
<td>Did not write final exam or otherwise complete course</td>
<td>0.00</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn</td>
<td>no equivalent</td>
</tr>
<tr>
<td>AU</td>
<td>Audit</td>
<td>no equivalent</td>
</tr>
<tr>
<td>CR</td>
<td>Credit without grade</td>
<td>no equivalent</td>
</tr>
<tr>
<td>WD</td>
<td>Withdrawal</td>
<td>no equivalent</td>
</tr>
<tr>
<td>WE</td>
<td>Withdrawal under extenuating circumstances</td>
<td>no equivalent</td>
</tr>
<tr>
<td>IP</td>
<td>In progress</td>
<td>no equivalent</td>
</tr>
</tbody>
</table>

Note: Credit is granted for A+, A, A-, B+, B, B-, C+, C, C-, D, 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 semesters (65-3, 66-1), A- and C+ grades were awarded; these grades were discontinued with the third (66-2) semester, as was the T (standing grade +) grade. A- and C+ were re-established with the 67-3 semester, discontinued in 78-2 semester and re-established in 79-3.

Prior to fall semester 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.

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extension may be granted by the department chair upon petition by the student.

**FX Grades**
The grade of FX has no numerical equivalent and is not included in the GPA calculation. FX is assigned for formal exchange courses only.

**GN Notation**
The notation GN (grade not reported) may be used if circumstances beyond the University’s control make it impossible for course grades to be assigned. The notation has no numerical equivalent and does not affect either the semester grade point average (GPA) or cumulative grade point averages (CGPA). The dean of the faculty responsible for the course shall advise the registrar, in writing, that the notation GN is approved for a course or for a particular group of students in a course.

**IP Grades**
The grade of IP has no numerical equivalent and is not included in the GPA calculation. IP is assigned in certain Education courses.

**N Grades**
The letter grade N is given when a student has registered for a course, but did not write the final examination or otherwise failed to complete the course work, and did not withdraw before the deadline date. An N is considered an F for purposes of scholastic standing.

A student receiving grade N must re-register for the course and participate in the course again, as required by the instructor, in order to achieve a different evaluation for the course.

**P and W Grades**
The grades of P and W have no numerical equivalent and do not affect either the SGPA or CGPA. The designation W will be given when a student withdraws (or is withdrawn) after the course drop period for a course graded on a pass (P) or withdrawn (W) basis.

**WD and WE Notations**
The notations WD and WE are not grades and do not affect either the GPA or CGPA. The notation WD identifies a course freely dropped by the student. The notation WE identifies a course drop approved for extenuating circumstances normally during week 6 through to the end of week 12 of a semester. Extenuating circumstances are defined as unusual circumstances beyond the student’s control which make it impossible for the student to complete the course. Different time periods are in effect for intersession and summer session. (For more complete details refer to “Course Drop Period” on page 34.) For semester specific dates, refer to the Undergraduate Schedule of Classes and Examinations (http://students.sfu.ca).

### Credit for the Semester
All credit earned for the semester will be granted, regardless of the grade point average (GPA) for the semester. 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 semester GPA and cumulative GPA, and the former course is excluded in the semester 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 semester GPA. See “Duplicate Transfer Credit” on page 33.

### Statement of Grades
At the end of each semester, grades for that semester are made available to registered students in good financial standing on the registration 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 semester grade point average (GPA) is a method of expressing the student’s performance for the semester as a numerical average. Each letter grade (except grades/noteations P, W, CC, AU, AE, CR, FX, DE, WD, WE and IP) is assigned a numerical equivalent, which is then multiplied by the credit hour 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.

Semester grade point average is computed by dividing the total number of grade points earned by the total number of credit hours taken in the semester (excluding those credit hours assigned to course with a final grade/noteation of P, W, CC, AU, AE, CR, FX, DE, WD, WE or IP).

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Numeric Value</th>
<th>Semester Hours</th>
<th>Grade Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>course 1</td>
<td>A</td>
<td>4.00</td>
<td>12.00</td>
</tr>
<tr>
<td>course 2</td>
<td>A+</td>
<td>4.33</td>
<td>12.99</td>
</tr>
<tr>
<td>course 3</td>
<td>B-</td>
<td>2.67</td>
<td>8.01</td>
</tr>
<tr>
<td>course 4</td>
<td>C</td>
<td>2.00</td>
<td>6.00</td>
</tr>
<tr>
<td>course 5</td>
<td>F</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16</td>
<td>39.00</td>
</tr>
</tbody>
</table>

**semester grade point average: 39/16 = 2.44**

The cumulative grade point average (CGPA) expresses performance as a numerical average for all semesters completed and is closed in the semester in which a degree or diploma is awarded by senate. A new CGPA begins when a student returns for further studies following the awarding of a degree or diploma.

The CGPA is calculated by dividing the total number of grade points earned to date by the total number of grade hours undertaken to date, with the exception of those courses assigned a final grade/noteation of P, W, CC, AU, AE, CR, FX, DE, WD, WE or IP. The CGPA calculated for semesters completed prior to the fall semester 1979 includes duplicate courses.

Repeat courses repeated in fall 1979 or thereafter and which have been assigned a final grade lower than the grade previously assigned are excluded from the CGPA calculation for the semester in which the course was repeated as well as any subsequent semester completed. If, however, a higher grade is achieved in the course when repeated, the repeat course(s) with the lower grade(s) will be excluded from the CGPA for the most recent semester and any subsequent semesters completed. However, the lower grade is reflected in the CGPA calculated for each semester up to the semester in which the higher grade was achieved.

If the same grade is earned for the repeated course, the course completed most recently will be included. 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 credit hours assigned for those courses, counting only the higher grade in courses that have been duplicated.

### 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’ include grades A+ through D, F, and N, but exclude P, W, CR, AE, CC, DE, GN, FX, IP and AU)

### Academic Alert
A student whose semester grade point average (SGPA) falls below 2.00, but who is not placed on any of the academic standings given below, shall receive an ‘academic alert’ notification and shall be advised to seek guidance at the Academic Resource Office.

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

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

### Extended Withdrawal
A student may be placed on extended withdrawal (EW) after she/he is required to withdraw (RTW), is readmitted and subsequently is on academic probation for one or more semesters (see Outcomes for a Student on Academic Probation below). A student on EW standing may not receive a ‘letter or 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 semester. If at the end of the semester
• the SGPA and the CGPA are each 2.00 or higher, the student shall be placed 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 is less than 2.00, but the CGPA is 2.00 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 2.00, the student shall be required to withdraw (RTW) from the university or, if previously required to withdraw (RTW), shall be placed on extended withdrawal (EW)

### 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 duplicated courses, only the higher grade is used in these GPA calculations.

<table>
<thead>
<tr>
<th>Graduation GPAs</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>3.00</td>
</tr>
<tr>
<td>honors degree*</td>
<td>3.00</td>
</tr>
<tr>
<td>general degrees</td>
<td>2.00</td>
</tr>
<tr>
<td>certificates</td>
<td>2.00</td>
</tr>
<tr>
<td>post baccalaureate diplomas</td>
<td>2.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program GPAs</th>
<th>All courses and all upper division courses taken in the program area</th>
</tr>
</thead>
<tbody>
<tr>
<td>joint honors*</td>
<td>3.00</td>
</tr>
<tr>
<td>honors*</td>
<td>3.00</td>
</tr>
<tr>
<td>joint majors</td>
<td>2.00</td>
</tr>
<tr>
<td>major</td>
<td>2.00</td>
</tr>
<tr>
<td>extended minors</td>
<td>2.00</td>
</tr>
<tr>
<td>minors</td>
<td>2.00</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

Convocation is held in June and October annually. Students who fulfill their degree requirements during the fall or spring semesters may attend the June ceremony. Graduates of the summer semester 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 semester, and are also available online at students.sfu.ca/convocation. See “Academic Calendar of Events” on page 10 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.

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/gosfu) 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 registered. 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 registered 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, examinations or any other activities of the University; misrepresentation of student disciplinary 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, which is available in the Library or any department office, or on the website www.sfu.ca/policies/teaching/.

Penalties for Acts of Student Misconduct

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 “1.16 Graduate Student Appeals” on page 243 for graduate student appeals.

Students may appeal certain University decisions as follows:

Reconsideration of Grades

Students who intend to appeal a course grade should first contact the Office of Admissions. 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. The Student Services office provides appeal forms and advice on submitting an appeal. You can also download a pdf of the enrolment appeal form at students.sfu.ca/pdf/forms/.

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.

Committee to Review University Admissions

The committee to review university admissions considers cases in which an individual feels aggrieved by the decision of the registrar to apply a particular admission, readmission or transfer credit policy in his or her specific case when special circumstances are present. An applicant, student or former student who wishes to appeal a decision of Student Services must submit the appeal in writing, specifying the special circumstances to be considered (see Grounds for Appeal listed under Senate Appeals Board). Appeals may also appear in person before the committee. The committee will consider all evidence presented, both written and oral.

Students who have questions regarding the processing of their application for admission or readmission or regarding the assessment of transfer credit should first contact the Office of Admissions.

Senate Appeals Board

Procedure

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 a registration 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.

**Leave to Appeal**

The senate appeals board will decide if an appeal has adequate grounds. If in the judgement of the board there are insufficient grounds, the appeal may be dismissed without a formal hearing. An appellant may resubmit an appeal for consideration only if new information is presented.

**Stage 1 – Written Submissions Considered**

All appeals which go forward to the board will be reviewed in two stages. In stage 1, the written documentation will be reviewed. The board will decide cases in which

- the appellant requests a written appeal only
- or
- the appellant requests an in-person hearing appeal but the senate appeals board considers that the written material presented is sufficient for a positive decision.

All other cases will be deferred until a later meeting for a stage 2 hearing.

**Stage 2 – In-person Hearings**

Appellants will be contacted by the secretary and asked to appear at a scheduled senate appeals board meeting. At the hearing, the appellant and/or her/his representative may provide information orally and answer questions posed by members of the senate appeals board. Decisions will normally be released shortly after the hearing.

**Other Appeal Committees**

Other committees may be contacted through Student Services.

- Tuition Refund Appeals Committee
- University Board on Student Discipline (T10.03)
- Senate Committee on Disciplinary Appeals (T10.04)

**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 604.291.4232.
Undergraduate Fees

Tuition Fraser Fee Schedule
Simon Fraser University assesses undergraduate tuition fees in accordance with a schedule of fees based primarily on the number of credit hours 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>Credit Hours</th>
<th>Basic Tuition Fee</th>
<th>Differential Tuition Fee for International Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>normal credit (per credit hour)</td>
<td>$148.10</td>
<td>$481.50</td>
</tr>
<tr>
<td>BUS courses at 200 level and above (per credit hour)</td>
<td>$195.60</td>
<td>$529.00</td>
</tr>
<tr>
<td>CMPT courses at 200 level and above (per credit hour)</td>
<td>$155.60</td>
<td>$489.00</td>
</tr>
<tr>
<td>ENSC courses at 200 level and above (per credit hour)</td>
<td>$163.00</td>
<td>$496.40</td>
</tr>
<tr>
<td>course challenge (per credit hour)</td>
<td>$148.10</td>
<td>$481.50</td>
</tr>
<tr>
<td>audit (per credit hour)</td>
<td>$74.05</td>
<td>$240.75</td>
</tr>
<tr>
<td>co-op practicum (per semester)</td>
<td>$627.00</td>
<td>$627.00</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 semester, he or she is either a citizen of Canada or has the status of a permanent resident of Canada.
2. The differential tuition 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 semester, 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 graduate 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 semester, 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 semester to another.
7. For students registered in any combination of 8 week or 16 week courses, tuition fees will be assessed per credit hour 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 above. These fees are not assessed to students aged 60 years or more who are Canadian citizens, or who have permanent Resident status is Canada. Those registered in audit courses, designated ‘off-campus’, courses, or distance education courses do not pay these fees.

<table>
<thead>
<tr>
<th>Services and Recreation-Athletics Fees</th>
<th>SSF</th>
<th>RAF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>three or fewer credit hours</td>
<td>$36.39</td>
<td>$30.32</td>
<td>$66.71</td>
</tr>
<tr>
<td>Intersession only</td>
<td>$36.39</td>
<td>$30.32</td>
<td>$66.71</td>
</tr>
<tr>
<td>summer session only</td>
<td>$36.39</td>
<td>$30.32</td>
<td>$66.71</td>
</tr>
<tr>
<td>four or more credit hours</td>
<td>$36.39</td>
<td>$60.65</td>
<td>$97.04</td>
</tr>
<tr>
<td>any combination of intersession, summer session, semester</td>
<td>$36.39</td>
<td>$60.65</td>
<td>$97.04</td>
</tr>
<tr>
<td>any combination of Co-op Education work term and credit course</td>
<td>$36.39</td>
<td>$30.32</td>
<td>$66.71</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 458.

<table>
<thead>
<tr>
<th>Student Activity Fee payable by all students, except as noted below*</th>
<th>$61.25</th>
</tr>
</thead>
<tbody>
<tr>
<td>*designated ‘off-campus’ courses only</td>
<td>$30.65</td>
</tr>
<tr>
<td>*3 or fewer course credit hours</td>
<td>$30.65</td>
</tr>
<tr>
<td>*Summer session courses only</td>
<td>$30.65</td>
</tr>
<tr>
<td>*Intersession courses only</td>
<td>$30.65</td>
</tr>
<tr>
<td>Co-op Education only</td>
<td>$30.65</td>
</tr>
<tr>
<td>any combination of intersession, summer session, semester</td>
<td>$61.25</td>
</tr>
</tbody>
</table>

Special Fees

| Application Fee | Level 1 | $45.00 |
| Application Fee | 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.

This fee is non-refundable and not applicable to tuition fees.

| Special Fees | Library/Identification Card Replacement | $16.50 |
| Special Fees | U-Pass Card Replacement | $20.00 |
| Special Fees | Replacement for an Original Degree, Diploma or Certificate Parchment | $21.50 |
| Special Fees | Residence Application | $35.00 |

| Special Fees | Graduation | $35.00 |
| Special Fees | award of certificate or diploma late application to graduate (non-refundable) | $20.00 |

International Program
For students who have been selected and have accepted the offer to participate in an international program, the following fees are applicable:

| Special Fees | formal exchange programs participation | $150.00 |
| Special Fees | international field school administration | $150.00 |
| Special Fees | computing science dual degree | $700.00 |

*Persons aged 60 or more years and who are Canadian citizens or have permanent resident status in Canada are exempt from this fee.

Universal Transit Pass
The U-Pass fee is $98 per semester. 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 39)
- students who are enrolled in Distance Education courses only

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 semester
- 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.

Seniors Desiring U-Pass
In order to become eligible for the U-Pass, anyone who is a designated senior for purposes of tuition fee
assessment must pay, in addition to the U-Pass fee, all fees associated with student status, including the Student Services and Recreation-Athletics fees and the Student Activity fee. The usual rules pertaining to the assessment of those fees will continue to apply. The student will be required to contact Student Services in each semester where he/she wishes to obtain the U-Pass and formally request that they have access to the U-Pass and that their student account be adjusted to include the student fees noted above.

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 ................................................................. $400

Biological Sciences

BISC 306, 326, 416 ................................................. $78
BISC 310, 404 .................................................................. $60
BISC 316 .................................................................. up to $12
BISC 406 .................................................................. up to $45

Contemporary Arts

FPA 130, 131, 290, 390 ........................................ $75
FPA 160, 161, 163, 233, 260, 262, 263, 265, 333,
360, 361, 362, 363, 364, 365, 460, 461 ........................................ $50
FPA 170, 375 ............................................................... $35
FPA 230, 231, 430, 432 ........................................... $100
FPA 252 ................................................................. $20
FPA 261, 393 ............................................................... $50
FPA 269, 369 ............................................................... $50
FPA 363 ................................................................. $50

FPA 374 .................................................................. $25

Distance Education

All courses offered through the Centre for Distance Education are assessed a $40 per semester 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 100, 403 ................................................................. $50
EASC 101 .................................................................. $20
EASC 102 .................................................................. $10
EASC 204, 401, 408, 410 ........................................... $30
EASC 206 .................................................................. up to $200
EASC 301, 303, 404 .................................................................. up to $100
EASC 304 .................................................................. up to $30
EASC 305 .................................................................. $80
EASC 306 .................................................................. up to $400
EASC 309, 313, 413, 418, 419 ........................................... up to $30
EASC 402 .................................................................. up to $150
EASC 404 .................................................................. up to $100
EASC 406 .................................................................. up to $550
EASC 408 .................................................................. up to $250
EASC 411 .................................................................. $100
EASC 416 .................................................................. up to $50
EASC 421 .................................................................. up to $50

Education

EDUC 330, 416, 428, 430, 476, 477 ........................................... $20
EDUC 331 .................................................................. $50
EDUC 452 ................................................................. $46

Education Professional

EDPR all 300 and 400 level courses ................................ $20

Environmental Science

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

Geography

GEOG 213 .................................................................. $60
GEOG 453 .................................................................. $50
GEOG 253, 323, 385, 417 ........................................... $15
GEOG 264, 441 .................................................................. up to $10
GEOG 310 .................................................................. up to $400
GEOG 313 .................................................................. $50
GEOG 353, 416 ............................................................... $35
GEOG 324 .................................................................. $20
GEOG 412 .................................................................. $100
GEOG 426 ................................................................. $100
GEOG 427, 428 .................................................................. up to $50
GEOG 497 ................................................................. $2,900 – $3,000

History

HIST 376 .................................................................. $12.50

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 credit hour.

Sociology and Anthropology

SA 364 .................................................................. $40
SA 371 .................................................................. $100 per semester

Viewing Your Student Account

When a change is made to any part of your registration, 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 100, 2400 Central City, 10153 King George Highway, Surrey, Monday – Friday 9 am – 4:30 pm, phone 604.268.7400.
- Simon Fraser University Vancouver, 515 West Hastings Street, Vancouver. Monday – Thursday, 9 am – 7:30 pm and Friday 9 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, 8888 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 semester are not required to pay the registration tuition deposit described below.

Payment of the Registration Tuition Deposit for Continuing Students

Continuing students registering for their second or subsequent semester are required to pay a registration tuition deposit of $100. Payment must be received and posted to the student account before a student will be given access to the registration system to select courses. Students must pay the registration
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 semester. Payment of the deposit cannot be deferred. Students eligible for any awards or scholarships will receive a refund from Student Services when the appropriate credits are received and processed. Students eligible for tuition fee waivers or holders of Faculty of Education tuition fee 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. 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 semester. Credit for scholarships and bursaries will be given only on the authority of the Financial Assistance office. Cancellation of Registration To cancel your entire registration, you must use the registration 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 cancelation of registration 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 Semester 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 registration 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 credit hours. The exact dates of the three ‘snapshots’ taken are: first, approximately one week after all students have been given access to the registration 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 Students in bad financial standing because of overdue University accounts will be precluded from registering in subsequent semesters. In addition, the University will withhold certain services. For example, Student Services will not release various letters and documents including: statement of grades, official transcripts of academic record, and parchments for degrees, diplomas and certificates. Delinquent accounts will be forwarded to a collection agency for appropriate action. Students with overdue accounts will be assessed a late fee penalty on outstanding fees: 2% (24% per annum) after the last day of the sixth week of classes, regardless of any pending scholarships, bursaries, awards, tuition waivers and school associate certificates. And an additional 2% will be assessed each month thereafter.

Refunds due to Overpayments To obtain a refund due to an overpayment, students must submit a refund request. 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 semester 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 enrolment appeals committee. See “Tuition Fee Appeals for Refund” on page 37.

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/studentaccounts/T2202A.
Financial Assistance and Awards

Financial Assistance

3200 Maggie Benston Student Services Centre, 604.294.8680 Registrar Information Service (Touch Tone service only), 604.291.4356 general enquiries, 604.291.4722 Fax, http://students.sfu.ca/fa/

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 the University. Some 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 semester

Externally administered programs

- see the specific award for deadlines

Government administered programs

- Government Student Loans: at least eight weeks before semester

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 unless 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.

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• 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 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 senate undergraduate awards adjudication committee has the right to give special consideration to course load requirements on scholarships, awards or bursaries for persons with disabilities who are unable to meet the course load requirements.

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.
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 604.291.4970 general enquiries, Fax 604.291.4722, 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 2007, please refer to the entrance scholarship brochure and application material. For more information please contact Application Services, 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 installments, students will be considered for scholarships available to continuing students. See “Scholarships for Continuing Students” on page 44.

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 $1,000.
- 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; earlier application is encouraged.

$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 a 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.

Inclusion of the Application for Student Financial Assistance form is required. See students.sfu.ca/fa. 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.

Inclusion of the Application for Student Financial Assistance form is required. See students.sfu.ca/fa. 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 semester from areas of British Columbia that are under-represented at SFU. 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. Dieuwert Memorial Entrance Scholarship

A scholarship will be awarded in the fall semester 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 Simeikameen 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 distributed over two semesters.

$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.

$3,500 Kenneth Strand National Scholarships

Recognize academic excellence for students outside of BC. Eligible for travel allowance.

$3,500 Summit Scholarships

Recognize academic excellence for students within BC. Eligible for travel allowance.

$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.

$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.

$1,000 TVS 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 semester. Not eligible for travel allowance.
For BC College Students; Application Required

BC College scholarship application deadlines:
April 30 for admission to the fall semester, September 30 for the spring semester, and January 31 for the summer semester.

$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 Assistance at Simon Fraser University by May 30th. Not eligible for travel allowance.

For International Students; Application Required

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: ten
Deadline: May 30
Eligible for travel allowance.

$3,500 Phi Theta Kappa International Summit Scholarships
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 baccalaureate are not eligible. Eligible for travel allowance.

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

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) or from a BC college with a high transfer average, will automatically receive an offer of this scholarship. This scholarship is entitled to the one-time travel allowance.

Stanley Morisse Memorial Scholarship
The Stanley Morisse Memorial Scholarship is awarded to a student transferring from the University of Cyprus or a Cypriot 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 semester of eligibility, unless otherwise stipulated. Challenge, audit and credit free courses are not considered.

Gordon M. Shrum International Entrance Scholarship
• 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 regular 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/fa). 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 Assistance.
• Scholarships are tenable for the semester indicated and will not normally be deferred. Students who do not register in the semester 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 semester by semester basis.

Eligibility
Eligibility is limited to students pursuing a first degree and will expire when a student’s total accumulated credit hours (including transfer credits) exceed by 10% the minimum number of credit hours 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 credits
• a minimum Simon Fraser University cumulative grade point average of at least 3.60, 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 semester GPA of 3.500 in the last semester 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 semester’s registration was in a single course of five credits or less, the last four semesters will be considered, and that semester of one course will be set aside in determining credit hour and semester 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 semester 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 semester.

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 semester; eligible students will be notified no later than the end of the fourth week of classes.

In fiscal 2005/06, the scholarship was paid at a rate of $100 per credit hour for normally graded courses in the semester. It is anticipated that the rate will be at least $100 per credit hour for fiscal 2006/07.

Scholarships for All Students

Hy Aisenstat Scholarship
Program code: UESO-517
Value: $2500
Awarded: Fall Spring Summer
Terms of reference: Three scholarships, valued at $2,500 each, are available annually to undergraduate students. Preference will be given to applicants who had continuous full-time employment in the hospitality industry before commencing or resuming studies at the university level. Applicants should include a letter detailing their employment history prior to commencing their university studies.

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. 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: $1752
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: UPSO-305
Value: $3750
Awarded: Spring Summer
Terms of reference: The scholarship will be awarded based on academic merit in any semester 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.

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.

CREO Electronics Corporation 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.

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.

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-309
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.

Orbital Technologies Inc. Scholarship in Engineering Science
Program code: UESO-289
Value: $1500
Awarded: Spring
Terms of reference: 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.

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. 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.

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.

MDI 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: UPSO-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).

Basil Peters/High Tech Exchange Group Scholarship
Program code: UESO-239
Value: $500
Awarded: Spring
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.

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. 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-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.

J. Newton Robinson Memorial Scholarship
Program code: UPSO-242
Value: $250
Awarded: Fall
Terms of reference: To an undergraduate student with high academic standing who is entering or in their third year of Engineering Science. 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.
service to the university community or the community at large.

Silent Witness Scholarship in Computing Science
Program code: UPSO-295
Value: $1500
Awarded: Summer
Terms of reference: To a fourth year student in Computing Science based on academic excellence.

Standard Broadcasting Corporation Limited Scholarship
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 course work each semester during tenure of the scholarship and maintain a 75% average. Apply to Science Council of British Columbia.

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 resume 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-321
Value: $700
Awarded: Fall
Terms of reference: To an undergraduate student 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-104
Value: $2000
Awarded: Fall
Terms of reference: The purpose of this award is to recognize achievements in 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 of Criminology Alumni Scholarships
Program code: UESO-318
Value: $500
Awarded: Summer
Terms of reference: Scholarships will be granted on the basis of academic performance to students in the School of Criminology.

Department of French Award For Excellence
Program code: UESO-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 Director of the Humanities Program.

Dr. Alfredo E. Hurtado Memorial Scholarship
Program code: UESO-274
Value: $1200
Awarded: Spring
Terms of reference: To an undergraduate student majoring in Spanish and/or Latin American Studies.

Pauline Jewett Scholarship
Program code: UESO-324
Value: $400
Awarded: Summer
Terms of reference: To a 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 level and at least 3 senior (300 or 400 level) 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.

Lorne M. Kendall Memorial Scholarship in Psychology
Program code: UESO-228
Value: $375
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. Nominations 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.
Liberal and Business Studies Program Scholarship
Program code: UPSO-297
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 nominated by the Academic Director of the Liberal and Business Studies Program in consultation with the Liberal and Business Studies Academic Steering Committee.

Jerry and Belle Lundie Memorial Scholarship
Program code: UPSO-231
Value: $500
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.

Margaret J. Menzel Memorial Scholarship
Program code: UPSO-235
Value: $1000
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 Assistance.

Ann and William Messenger Undergraduate Scholarships in English
Program code: UESO-330
Value: $2000
Awarded: Fall
Terms of reference: Awarded on the basis of academic achievement to approved English majors who have completed at least 90 credit hours.

Robbie Robertson Scholarship in Gerontology
Program code: UPSO-273
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 Administration application form to be sent to the Gerontology Diploma Program, Simon Fraser University, 555 West Hastings Street, Vancouver, BC, V6B 5K3.

Scotiabank Student Scholar in the Faculty of Arts Award
Program code: UESO-312
Value: $2000
Awarded: Summer
Terms of reference: Awarded 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 (cgpaa). 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.

John Stell Sykes Scholarship
Program code: UESO-245
Value: $225
Awarded: Spring
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.

Vancouver Port Authority Undergraduate Scholarship in Geography
Program code: UPSO-284
Value: $2500
Awarded: Fall
Terms of reference: The scholarship, based on academic merit, will be given to a Geography student entering the fourth year of studies. In order to receive the second disbursement, the student must maintain academic standards.

Scholarships for Business Administration Students

Accenture Scholarship in Business Administration
Program code: UESO-323
Value: $1100
Awarded: Spring
Terms of reference: To a full-time undergraduate student who is in their third year of study in the Faculty of Business Administration. To be considered eligible, candidates should have completed one 300 level Management Information Systems course, demonstrate their involvement in extracurricular and 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.

Bank of Montreal Undergraduate Scholarship in Business Administration
Program code: UPSO-283
Value: $1000
Awarded: Fall
Terms of reference: To business Administration students who intend to pursue a career in the financial industry upon graduation. Preference will be given to students in the Finance area of concentration. At least one of the two awards will be given to a Business Administration co-op student.

Keith and Betty Beedie Foundation Scholarship in Business Administration
Program code: UESO-520
Value: $1300
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.

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.

Faculty of Business Administration Alumni Scholarships
Program code: UESO-316
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.

Chevron Canada Ltd Scholarship
Program code: UESO-282
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.

Chien’s Cultural Foundation Scholarship
Program code: UESO-521
Value: $1100
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.

Chinese Federation of Commerce of Canada Scholarship
Program code: UESO-529
Value: $1100
Awarded: Spring
Terms of reference: Award is based on scholastic 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 students 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
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).

Financial Executives Institute Scholarship
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.

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
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: $900
Awarded: Spring
Terms of reference: The award, based on academic merit, will be given to the top student in the Faculty of 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.

ICABC Business Administration Co-Op Education 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 three hundred level.

ICABC Desmond O’Brien Memorial 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 semester 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 award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of candidates by the Co-ordinator, Business Administration Co-operative Education Accounting Program.

Maria Kuchar Accounting Scholarship
Program code: UESO-263
Value: $3000
Awarded: Fall
Terms of reference: Maria Kuchar Accounting Scholarships of approximately $3000 awarded in two disbursements, will be awarded in the fall semester 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: $500
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 made available, 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 SFU 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: $2000
Awarded: Summer
Terms of reference: Award will be granted to a Faculty of Business Administration 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.

Shell Canada Limited Scholarship in Business Administration
Program code: UESO-264
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.

Lis Welch Scholarship in Marketing
Program code: UESO-522
Value: $725
Awarded: Fall
Terms of reference: The scholarship will be awarded in the fall semester 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.

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.

Mildred Wirtanen Scholarship in Business
Program code: UESO-277
Value: $2000
Awarded: Fall
Terms of reference: Serve Simon Fraser University on its Board of

Simon Fraser University 2006 • 2007 Calendar
Terms of reference: To an undergraduate student in Business Administration who shows a significant improvement in academic studies.

Scholarships for Education Students

Carol and Gary Chapman Memorial Scholarship in Education
Program code: UESO-518
Value: $3000
Awarded: Summer
Terms of reference: To an outstanding full-time student in the Faculty of Education’s Professional Development Program based on academic merit and overall performance during the completion of the PDP practica. The award will be made by the Senate Undergraduate Awards Adjudication Committee on Scholarships, Awards and Bursaries on the nomination of the Dean, Faculty of Education.

Madge Hogarth Scholarships in Education
Program code: UESO-224
Value: $400
Awarded: Summer
Terms of reference: Two awards will be made to the most promising students based on academic standing prior to entry into the Professional Development Program (PDP), although teaching performance may be considered. One scholarship will be awarded to a student who enters the PDP in the fall semester and one to a student who enters PDP in the spring semester. The awards will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Faculty of Education.

John Rosborough Memorial Scholarship in Education
Program code: UESO-326
Value: $650
Awarded: Summer
Terms of reference: The scholarship will be awarded to an outstanding student in the Faculty of Education’s Professional Development Program based on academic merit, overall performance during the completion of the PDP practica, and a demonstrated interest in some aspect of information technology in the field of education. Applications for the scholarship should include a letter and resume indicating involvement and interest with the information technology in education. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Dean, Faculty of Education.

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: Awarded annually in any semester based on academic performance. Open to upper division students, this scholarship is for students who intend to pursue careers teaching children or youth and who have interest in acquiring those skills necessary to aid students with reading difficulties. The application should include a discussion of the student’s interests, specifically in the area of remedial reading.

Scholarships for Science Students

Association of Professional Engineers and Geoscientists of BC Scholarship in Earth Sciences
Program code: UPSO-306
Value: $1500
Awarded: Fall
Terms of reference: One APEGBC Scholarship in Earth Sciences valued at $1500 will be made available annually in any semester, 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-332
Value: $1000
Awarded: Fall
Terms of reference: To an undergraduate student(s) in their final year of an approved major or honours 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 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.

Fernandez Earle Student Exchange Scholarship
Program code: UESO-331
Value: $10000
Awarded: Fall Spring Summer
Terms of reference: Student Exchange Scholarship will be awarded based on academic merit to a 4th year Biological Sciences student to cover the costs associated with a two-semester student exchange with the University of Hawaii. The qualifying candidate must use their time on the exchange to write and complete their Honours thesis focusing on marine biology and/or conservation. In order to be considered for the scholarship, applicants should provide an outline of their proposed thesis research and one letter of recommendation from a SFU faculty member familiar with the applicant's work. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of Biological Sciences.

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 honours degree in Earth Sciences based on academic performance in upper-level Earth Sciences courses.

Goel Memorial Scholarship
Program code: UPSO-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: 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.

Ron MacLeod Scholarship in Environmental Science
Program code: UESO-307
Value: $850
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. In the event that no suitable candidates from the above are available, then children of persons engaged or formerly engaged in the logging or pulp industry in BC will be considered. Students must attach to the application form a resume including details of family service with the company and/or the industry.

Patrick Duncan McTaggart-Cowan Award in Physical Sciences
Program code: UESO-234
Value: $650
Awarded: Spring
Terms of reference: This scholarship fund was established in honour of Dr. Patrick Duncan McTaggart-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 academic 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.
The Department of Chemistry Scholarship Committee

Value: $725

Division credits in geography or earth sciences. At least 90 undergraduate credits including 12 upper

Terms of reference: The scholarships are granted in any semester based on academic merit 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 semester 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.

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 Award

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. 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.

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 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 course work each semester during tenure of the scholarship and maintain a 75% average. Apply to Science Council of British Columbia. -www.scbcprograms/scholarship_trussell.htm-

University Women's Club of Vancouver Women in Science Scholarship

Program code: UESO-280

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.

Vancouver Port Authority Undergraduate Scholarship in Geography

Program code: UPSO-284

Value: $2500

Awarded: Fall

Terms of reference: The scholarship, based on academic merit, will be given to a Geography student entering the fourth year of studies. In order to receive the second disbursement, the student must maintain academic standards.

Watson Wyatt Scholarship in Actuarial Science

Program code: UESO-516

Value: $2000

Awarded: Spring

Terms of reference: To a student in an approved Actuarial Science program who has completed ACMA 320. Scholastic excellence 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, Statistics & Actuarial Science.

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 Student Athletes

Bill De Vries Athletic Award

Program code: UEAA-061

Value: $295

Awarded: Fall Spring Summer

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. Academic accomplishment may be considered in selection of the recipient.

Howie Larke Scholarship in Sport Information

Program code: UEAA-052

Value: $55

Awarded: Fall Spring Summer

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-000

Value: $1000

Awarded: Fall Spring Summer

Terms of reference: To a female student enrolled in any approved full-time program. Students must be registered in nine credit hours and have a minimum CGPA of 3.5 based on completion of 60 hours at Simon Fraser University. Consideration will be given to exemplary leadership and contributions to the enhancement of the athletic specialty in which the student is involved.

Simon Fraser University Track and Field Alumni Scholarship

Program code: UEAA-042

Value: $500

Awarded: Fall Spring Summer

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

Regulations

The following regulations govern all university, private, and endowed bursaries over which the University has jurisdiction. Many of the following bursaries have been made possible by generous donations.

• 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.

• Both undergraduate and graduate students are eligible unless otherwise indicated.

• Students must have a demonstrated financial need.

• Students must have a minimum CGPA of 2.00 to be eligible for bursaries.

• Undergraduate students must be registered in a minimum of nine semester hours of normal graded courses in the semester of application, unless otherwise indicated. Challenge, audit, and credit free courses will not be considered. Students who register in fewer than nine semester 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. Students who do not register or subsequently change to on-leave status may have their awards cancelled.
The student must apply on the Simon Fraser University bursary application form (http://students.sfu.ca/fa). 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 semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.

Bursaries for All Students

Aboriginal Student Bursary Program
Program code: UUBO-516
Value: $280
Awarded: Fall Spring Summer
Terms of reference: Bursaries are available each semester to entering and continuing aboriginal students attending Simon Fraser University who have a living connection to their own aboriginal community. Students shall submit documentation supporting their connection with their bursary application. Awards will be made to students in good academic standing on the basis of demonstrated financial need. The Senate Awards Adjudication Committee will make the awards.

Alumni Scholarship and Bursary Endowment Fund
Program code: UUEBO-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 performance.

David Armstrong Memorial Bursary
Program code: UUEBO-699
Value: $1000
Awarded: Fall
Terms of reference: To an undergraduate student in the co-op program. The bursary is based on demonstrated financial need and satisfactory academic performance.

Laura (Pat) Band and Richard W. Band Bursary for First Nations Students
Program code: UEEBO-540
Value: $400
Awarded: Fall Spring Summer
Terms of reference: The bursary is granted in any semester 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 credits 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.

The BC Coalition of People with Disabilities/Rick Watson Bursary
Program code: UPBO-698
Value: $500
Awarded: Fall
Terms of reference: The Bursary will be awarded annually to an undergraduate student in an English or Communication program who has a disability which creates functional limitations as related to academic achievement as verified by the Centre for Students with Disabilities at Simon Fraser University. The bursary will be granted to students in good academic standing on the basis of financial need.

Bel-Par Industries Limited Bursary
Program code: UEBO-664
Value: $700
Awarded: Fall
Terms of reference: To an undergraduate student in any faculty. The bursary will be granted to a student who has maintained an satisfactory academic record and 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: UPBBO-581
Value: $1000
Awarded: Fall Spring Summer
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 semester'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 fibre of the 50th wedding anniversary of the Honourable Angelo E. Branca and Mrs. Branca, a bursary of $1000 is available each year for an incoming undergraduate student. Preference will be given to students who have completed at least 60 credit hours.

Pat Blunden Undergraduate Bursaries
Program code: UEBO-741
Value: $250
Awarded: Summer
Terms of reference: To undergraduate student in any faculty at Simon Fraser University.

Louis Philippe and L. Pierre Bonneau Memorial Bursary
Program code: UEBO-862
Value: $500
Awarded: Spring
Terms of reference: Bursaries will be awarded annually in the spring semester to undergraduate students in any faculty who are in satisfactory academic standing and demonstrate financial need.

The Honourable Angelo E. Branca and Mrs. Branca Bursary
Program code: UEBO-586
Value: $700
Awarded: Spring
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 semester'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 fibre of the 50th wedding anniversary of the Honourable Angelo E. Branca and Mrs. Branca, 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. The Simon Fraser University Childcare Society and the Simon Fraser University Childcare Society, through this fund, are committed to providing access to daycare services for children in the University community.

Confratellanza Italo Canadese Bursary
Program code: UEBO-591
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: UEBO-649
Value: $1000
Terms of reference: To undergraduate students with financial need and satisfactory academic standing. Preference will be given to Italian-Canadian students if they meet the criteria.
## Undergraduate

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Program Code</th>
<th>Value</th>
<th>Awarded</th>
<th>Terms of Reference</th>
<th>Program Code</th>
<th>Value</th>
<th>Awarded</th>
<th>Terms of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gordon R. Diamond Bursary</td>
<td>UEBO-535</td>
<td>$1000</td>
<td>Fall</td>
<td>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 Cornell Lightbody law firm 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.</td>
<td>UEBO-535</td>
<td>$1000</td>
<td>Fall</td>
<td>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 Cornell Lightbody law firm 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.</td>
</tr>
<tr>
<td>Dr. Jack Diamond Bursary</td>
<td>UEBO-615</td>
<td>$1000</td>
<td>Summer</td>
<td>Terms of reference: To undergraduate students in any faculty on the basis of demonstrated financial need and good academic standing.</td>
<td>UEBO-615</td>
<td>$1000</td>
<td>Summer</td>
<td>Terms of reference: To undergraduate students in any faculty on the basis of demonstrated financial need and good academic standing.</td>
</tr>
<tr>
<td>Dr. Ben Guillson Bursary</td>
<td>UEBO-640</td>
<td>$500</td>
<td>Fall</td>
<td>Terms of reference: To second, third or fourth year students in any undergraduate program. In recognition of Dr. Guillson's work, evidence of community service will be considered in making the award.</td>
<td>UEBO-640</td>
<td>$500</td>
<td>Fall</td>
<td>Terms of reference: To second, third or fourth year students in any undergraduate program. In recognition of Dr. Guillson's work, evidence of community service will be considered in making the award.</td>
</tr>
<tr>
<td>Madge Hogarth Bursaries</td>
<td>UEBO-674</td>
<td>$325</td>
<td>Fall</td>
<td>Terms of reference: To students who financially support their children and demonstrate financial need.</td>
<td>UEBO-674</td>
<td>$325</td>
<td>Fall</td>
<td>Terms of reference: To students who financially support their children and demonstrate financial need.</td>
</tr>
<tr>
<td>Hambur Foundation Bursary</td>
<td>UEBO-559</td>
<td>$1000</td>
<td>Fall</td>
<td>Terms of reference: To women students with satisfactory academic standing and need for financial assistance.</td>
<td>UEBO-559</td>
<td>$1000</td>
<td>Fall</td>
<td>Terms of reference: To women students with satisfactory academic standing and need for financial assistance.</td>
</tr>
<tr>
<td>ODE Evelyn Price Memorial Bursary</td>
<td>UEBO-641</td>
<td>$700</td>
<td>Fall</td>
<td>Terms of reference: To an entering student who demonstrates financial need and who has a satisfactory academic standing.</td>
<td>UEBO-641</td>
<td>$700</td>
<td>Fall</td>
<td>Terms of reference: To an entering student who demonstrates financial need and who has a satisfactory academic standing.</td>
</tr>
<tr>
<td>Ken and Su Jang Entrance Bursary</td>
<td>UEBO-672</td>
<td>$1500</td>
<td>Fall</td>
<td>Terms of reference: To students in any faculty on the basis of demonstrated financial need and satisfactory academic performance.</td>
<td>UEBO-672</td>
<td>$1500</td>
<td>Fall</td>
<td>Terms of reference: To students in any faculty on the basis of demonstrated financial need and satisfactory academic performance.</td>
</tr>
<tr>
<td>Charles Chan Kent Golden Wedding Bursaries</td>
<td>UEBO-564</td>
<td>$500</td>
<td>Fall</td>
<td>Terms of reference: To an undergraduate student in any faculty, who has determined financial need and satisfactory academic standing.</td>
<td>UEBO-564</td>
<td>$500</td>
<td>Fall</td>
<td>Terms of reference: To an undergraduate student in any faculty, who has determined financial need and satisfactory academic standing.</td>
</tr>
<tr>
<td>Donna Margaret Laws Undergraduate Bursary</td>
<td>UEBO-546</td>
<td>$1000</td>
<td>Fall</td>
<td>Terms of reference: To students in any faculty who are on welfare assistance.</td>
<td>UEBO-546</td>
<td>$1000</td>
<td>Fall</td>
<td>Terms of reference: To students in any faculty who are on welfare assistance.</td>
</tr>
</tbody>
</table>

Simon Fraser University 2006 • 2007 Calendar
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.

Sue MacDonald Memorial Bursary
Program code: UEBO-654
Value: $700
Awarded: Fall Spring
Terms of reference: Two or more bursaries will be awarded to undergraduate students in any faculty who have proven financial need and a satisfactory academic record.

Dorothy May Martin Endowment Bursary
Program code: UEBO-648
Value: $1000
Awarded: Spring Summer
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 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.

Nilikman/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-882
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.

Osimath Club Bursary
Program code: UEBO-803
Value: $750
Awarded: Fall
Terms of reference: For mature, continuing students at Simon Fraser University, who have financial need and good academic standing. The Osimath 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: 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.

Margaret Anne Paterson Bursary
Program code: UEBO-527
Value: $700
Awarded: Summer
Terms of reference: The bursary will be given annually in any semester to an undergraduate student in any faculty. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance. The recipient should be attending university as a mature student at least 5 years after leaving secondary school.

Permanant Bursary Endowment Plan
Program code: N/A
Value: $200
Awarded: Fall 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 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. Hecht
- Stephen Hinchliff 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 Mrs. 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 Assistance 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 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.

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 Semester 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.

Sceptre Investment Counsel Administrative/Union Pension Plan Bursary
Program code: UEBO-721
Value: $1500
Awarded: Fall
Terms of reference: To a student holding satisfactory academic performance. The recipient should be attending university as a mature student at least 5 years after leaving secondary school.

Simon Fraser University 2006 - 2007 Calendar
<table>
<thead>
<tr>
<th>Fund</th>
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<th>Value</th>
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<th>Program Terms of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. Rosalie Segal Endowment Fund for Students With Special Needs</td>
<td>UEO-604</td>
<td>$500</td>
<td>Fall Spring Summer</td>
<td>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.</td>
</tr>
<tr>
<td>Simon Fraser Student Society Bursary</td>
<td>UPBO-571</td>
<td>$800</td>
<td>Spring</td>
<td>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.</td>
</tr>
<tr>
<td>Simon Fraser University 10th Anniversary Endowment Bursary</td>
<td>UEO-504</td>
<td>$500</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: This fund has been established to provide bursaries for students in financial need who maintain a GPA of 2.00.</td>
</tr>
<tr>
<td>Simon Fraser University Bursary Endowment Fund</td>
<td>UEO-502</td>
<td>$500</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: All undergraduates in financial need are eligible to apply for these bursaries. A minimum CGPA of 2.00 is required.</td>
</tr>
<tr>
<td>Simon Fraser University Daycare Bursaries</td>
<td>UUBO-700</td>
<td>$100</td>
<td>Fall Spring Summer</td>
<td>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.</td>
</tr>
<tr>
<td>SFU Field School Bursary</td>
<td>UUBO-510</td>
<td>$250</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: Bursaries will be available each semester 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.</td>
</tr>
<tr>
<td>SFU Foreign Exchange Bursary</td>
<td>UUBO-512</td>
<td>$250</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: Bursaries will be available each semester 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.</td>
</tr>
<tr>
<td>International Co-operative Education Bursary</td>
<td>UUBO-514</td>
<td>$250</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: Bursaries will be granted in any semester 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.</td>
</tr>
<tr>
<td>Simon Fraser University International Students' Emergency Assistance Fund</td>
<td>UPBO-637</td>
<td>$800</td>
<td>Fall Spring Summer</td>
<td>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.</td>
</tr>
<tr>
<td>Simon Fraser University Open Bursaries</td>
<td>UUBO-500</td>
<td>$500</td>
<td>Fall Spring Summer</td>
<td>Terms of reference: Must be registered in a minimum of 9 credit hours and have satisfactory academic standing.</td>
</tr>
<tr>
<td>SFU Punjabi Students Association Bursary</td>
<td>UUBO-521</td>
<td>$450</td>
<td>Summer</td>
<td>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 semester. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in any faculty.</td>
</tr>
<tr>
<td>Jennifer Allen Simons Bursary</td>
<td>UEO-669</td>
<td>$1000</td>
<td>Spring</td>
<td>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 semester at Simon Fraser University as a full-time student.</td>
</tr>
<tr>
<td>B and B Sivertz Bursary</td>
<td>UEO-656</td>
<td>$1000</td>
<td>Fall</td>
<td>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.</td>
</tr>
<tr>
<td>Harry and Dora Annie Smee Bursary</td>
<td>UEO-606</td>
<td>$800</td>
<td>Fall</td>
<td>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.</td>
</tr>
<tr>
<td>Merle L. Smith Bursary</td>
<td>UPBO-572</td>
<td>$525</td>
<td>Fall</td>
<td>Terms of reference: A physically challenged student in any faculty who is beyond first year studies. Initial preference will be given to wheelchair users.</td>
</tr>
<tr>
<td>Squamish Nation Bursary</td>
<td>UEO-738</td>
<td>$500</td>
<td>Fall Spring Summer</td>
<td>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 within the Squamish Nation.</td>
</tr>
<tr>
<td>Dorothy Sullivan Bursary</td>
<td>UEO-690</td>
<td>$800</td>
<td>Fall Spring Summer</td>
<td>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.</td>
</tr>
<tr>
<td>TCG International Undergraduate Bursaries</td>
<td>UEO-644</td>
<td>$1500</td>
<td>Fall</td>
<td>Terms of reference: The bursary will be granted to undergraduate students in any faculty with satisfactory academic standing and experiencing 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, disbursement of the awards will be at the discretion of Simon Fraser University.</td>
</tr>
<tr>
<td>Trident Enrichment Society Bursary</td>
<td>UEO-696</td>
<td>$600</td>
<td>Fall</td>
<td>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 applicant’s participation in community service.</td>
</tr>
<tr>
<td>Catherine Tse Bursary For Simon Fraser University Field Schools</td>
<td>UPBO-696</td>
<td>$300</td>
<td>Fall Spring Summer</td>
<td>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.</td>
</tr>
<tr>
<td>TSSU Member Child Care Bursary</td>
<td>UUBO-550</td>
<td></td>
<td></td>
<td>Terms of reference: The awards are based on financial need, and satisfactory academic performance. Preference will be given to single parent students.</td>
</tr>
</tbody>
</table>
**Bursaries for Applied Sciences Students**

**Canadian Federation of University Women – North Vancouver Bursary**
- Program code: UPEB-574
- Value: $1000
- Awarded: Fall
- 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: UEBB-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 experiencing financial need in the continuing pursuit of his/her studies.

**Delcan Corporation Bursaries**
- Program code: UPB-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 Assistance, and must include a letter of recommendation from the Office of the Dean of the major program.

**Engineers’ Wives’ Association Bursary**
- Program code: UEBB-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 Faculty of Applied Sciences majoring in Engineering. The applicant should be a Canadian citizen or a permanent resident of Canada.

**Aucie and Arthur Fouks Bursary in Publishing Studies**
- Program code: UEBB-526
- Value: $1000
- Awarded: Fall
- Terms of reference: One or more bursaries will be awarded annually in the Fall semester to a student enrolled in a degree program in Publishing Studies. The applicant should have a satisfactory academic standing and a 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.

**JimMar Bursary in Engineering**
- Program code: UEBB-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 semester based on demonstrated financial need and satisfactory academic performance.

**Ralph Kerr Memorial Bursary**
- Program code: UEBB-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.

**Olga and Richard Murray Bursary in Applied Sciences**
- Program code: UEBB-725
- Value: $1000
- Awarded: Fall
- 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.

**Pacific National Foundation Endowment Bursary**
- Program code: UEBB-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.

**Kazuya Shinyashiki Memorial Bursary in Computing Science**
- Program code: UEBB-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: UEBB-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 Senior Secondary School. Financial need and satisfactory academic standing is required.
a student from outside the Greater Vancouver Regional District.

Victor J. Sundberg Memorial Bursary in Engineering Science
Program code: UEB0-881
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 Mary Surbey Bursary
Program code: UEB0-723
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.

Vancouver Foundation Health Science Bursaries
Program code: UPB0-578
Value: $500
Awarded: Fall Spring Summer
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

B.C. Shopping Centre Association Bursary
Program code: UPB0-604
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: UEB0-715
Value: $1000
Awarded: Fall Spring
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance. Preference will be given 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 Carlton Bursary in Dance
Program code: UEB0-522
Value: $900
Awarded: Fall Spring Summer
Terms of reference: The Gloria Garrett Carlton Bursary is awarded at a portion of the income earned on the endowment, will be awarded annually in any semester. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students majoring in Dance in the School of Contemporary Arts.

Chien’s Cultural Foundation Bursary
Program code: UEB0-707
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: UEB0-590
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: UEB0-673
Value: $225
Awarded: Fall Spring Summer
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: UEB0-724
Value: $500
Awarded: Fall Spring Summer
Terms of reference: Granted to undergraduate students majoring in English. The bursary is granted in any semester based on demonstrated financial need and satisfactory academic performance.

Laurence Mervyn Cox Bursary in English
Program code: UEB0-541
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 honours program in the Department of English and to Canadian citizens or permanent residents of Canada.

School of Criminology Alumni Bursaries
Program code: UEB0-530
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: UPB0-703
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: UEB0-542
Value: $250
Awarded: Fall Spring Summer
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.

English Faculty Honours Bursary
Program code: UEB0-730
Value: $500
Awarded: Fall Spring
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: UEB0-679
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 Bursary
Program code: UEB0-659
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.

Robin Hoodspith Bursary in English
Program code: UPB0-609
Value: $500
Awarded: Spring Summer
Terms of reference: To an undergraduate student with an approved English major who is experiencing financial need.

IATSE-Motion Picture Technicians Union Local 891 Bursary
Program code: UPB0-694
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 semester based on demonstrated need and satisfactory academic performance.

ICBC/Brian Jones Memorial Bursary in Criminology
Program code: UEB0-524
Value: $750
Awarded: Summer
Terms of reference: Granted on the basis of demonstrated financial need and satisfactory academic performance to undergraduate students in the School of Criminology.

IODE Verna Allen Memorial Bursary
Program code: UPB0-561
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 with preference given to individuals who have prior schooling (or partially educated) in Canada.

Florence Godwin IODE Bursary in Criminology
Program code: UEB0-650
Value: $500
Awarded: Fall
Terms of reference: To an undergraduate student majoring in Criminology, on the basis of demonstrated financial need and satisfactory academic performance. The recipient may be a Canadian citizen or permanent resident of Canada.

Audrey E. Jang Memorial Bursary in Arts and Social Sciences
Program code: UEB0-740
Value: $1000
Awarded: Fall Spring
Terms of reference: Granted based on demonstrated financial need to an undergraduate student(s) in any
year who has/have entered Simon Fraser University from a United World College. Preference is given to students in the Faculty of Arts and Social Sciences.

Linda Margaret Johnston Bursary in the Arts
Program code: UEBO-543
Value: $500
Awarded: Fall
Terms of reference: The award(s) will be given in the Fall Semester to undergraduate students, entering fourth year, with concentration in any area of study in the Centre for Performing Arts.

Valerie Ann Kilby Memorial Bursary
Program code: UEBO-685
Value: $700
Awarded: Fall
Terms of reference: To an upper level undergraduate student majoring in Psychology, Preference will be given to a student who graduated from Centennial Secondary School in Coquitlam. The bursary will also be based on financial need and satisfactory academic standing in the continuing pursuit of studies.

Keith Gilbert Loughlin Bursary in Gerontology
Program code: UEBO-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 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.

Grace Woodsworth MacInnis Bursary
Program code: UEBO-704
Value: $700
Awarded: Spring
Terms of reference: To an undergraduate student who either has an approved minor in Humanities or has an approved major in Women’s Studies or Political Science. The recipient should have demonstrated financial need and a satisfactory academic standing; preference given to a woman student.

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 to full-time undergraduate or graduate students in the Department of Women’s Studies.

McCaull 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 dependants of members of the Fireman’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
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
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 given 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 with an approved major or extended minor in Visual Arts. Please note that students receiving the Secondary Scholarship are not eligible to receive a bursary from the funds as well.

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 Selfinger Linguistics Bursaries
Program code: UEBO-661
Value: $1000
Awarded: Fall
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
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.

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 Beedle Foundation Bursary in Business Administration
Program code: UEBO-698
Value: $1000
Awarded: Summer
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 bursary will be granted on the basis of satisfactory academic performance.

Faculty of Business Administration Alumni Bursaries
Program code: UEBO-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: 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.

Connor, Clark & Lunn Bursary
Program code: UPBO-684
Value: $1000
Awarded: Fall
Terms of reference: To 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: UEBO-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 who is in financial need.

A. John Ellis Bursary in Business Administration
Program code: UEBO-711
Value: $1000
Awarded: Fall
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: UEBO-684
Value: $500
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: 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.

Chu On Fok and Wai Yuk Fok Foundation Bursary
Program code: UEBO-545
Value: $250
Awarded: Summer
Terms of reference: To a student in satisfactory academic standing and demonstrated financial need.

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: UEBO-722
Value: $600
Awarded: Spring
Terms of reference: Granteed to undergraduate students in the Faculty of Business Administration based on demonstrated financial need and satisfactory academic performance.

Ivanhoe Cambridge Bursary
Program code: UEBO-633
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: UPBO-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: 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.

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: UEBO-727
Value: $1000
Awarded: Spring
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.

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.

Vancouver Executives Association Bursary in Business Administration
Program code: UEBO-588
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: UEBO-731
Value: $500
Awarded: Summer
Terms of reference: Given to an undergraduate student in the Faculty of Business Administration with a concentration in marketing.

Bruce and Lis Welch Bursary in Business
Program code: UEBO-717
Value: $1200
Awarded: Summer
Terms of reference: 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.
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: UEBO-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: UEBO-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**

**BC Exchange Teachers’ Association Bursary**

Program code: UPBO-594
Value: $300
Awarded: Summer

Terms of reference: Granted to undergraduate or graduate students in the Faculty of Education, in any semester based on demonstrated financial need and satisfactory academic performance.

**University Women’s Club of Vancouver/Jean Beatty Memorial Bursary in Education**

Program code: UEBO-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: UEBO-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: UEBO-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: UPBO-610
Value: $500
Awarded: Fall Spring

Terms of reference: The bursary is offered based on demonstrated financial need and satisfactory academic performance to students with dependants who are entering or enrolled in the Professional Development Program in the Faculty of Education at Simon Fraser University.

**Faculty of Education Alumni Bursaries**

Program code: UEBO-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 Special Bursary**

Program code: UEBO-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 semester. The bursary is awarded for the semester in which EDUC 405 is undertaken.

**Polly Evenden Bursary in Geography Education**

Program code: UEBO-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.

**Pacific National Foundation Endowment Bursary**

Program code: UEBO-855
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: UEBO-734
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: UEBO-860
Value: $1000
Awarded: Fall

Terms of reference: To a first year student in PDP in the Faculty of Education. Satisfactory academic standing and demonstrated financial need is required.

**VanCity Credit Union Bursary**

Program code: UPBO-836
Value: $500
Awarded: Fall Spring

Terms of reference: To a student in any year of the Bachelor of Education, or the Professional Development Program in the Faculty of Education. Applicants must be a member or the son or daughter of a member of the VanCity Credit Union. Bursaries will be granted on the basis of demonstrated financial need and satisfactory academic performance.

**Vancouver Elementary School Teachers’ Association Bursary**

Program code: UPBO-577
Value: $600
Awarded: Fall

Terms of reference: To students who are residents of Vancouver or students who have attended a Vancouver elementary school and are proceeding to a degree or certificate in teaching. Recipients are selected also on the basis of need. The awards offered are as follows:

- the Elizabeth Dobbins Memorial Bursary open to students entering third year in the Faculty of Education at Simon Fraser University
- the Owen J. Thomas Memorial Bursary open to students entering the fourth year in the Faculty of Education at Simon Fraser University.

**Bursaries for Science Students**

**Peter and Elizabeth Belton Bursary in Biology**

Program code: UEBO-729
Value: $500
Awarded: Summer

Terms of reference: To undergraduate students in the Faculty of Science majoring in biology. The bursary is granted on the basis of demonstrated financial need and satisfactory academic performance.

**Undergraduate Biology Student Union Bursary**

Program code: UPBO-695
Value: $100
Awarded: Summer

Terms of reference: One bursary valued at $100 will be available annually in any semester. The bursary, based on financial need, will be granted to an undergraduate student who is an approved biology major and is in good academic standing.

**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).

**Curzon-Digman Bursary**

Program code: UEBO-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 subjected 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: UPBO-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 Assistance, and 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.

**IODE Burnaby Municipal Chapter Bursary**

Program code: UEBO-658

Value: $750

Awarded: Fall

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.

**Ralph Kerr Memorial Bursary**

Program code: UEBO-599

Value: $1000

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.

**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.

**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 semester to a student with an approved major in MBB. The bursary is based on financial need and satisfactory academic performance.

**Irene May Surbery 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 however, 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 Action 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.

**Vancouver Foundation Health Science Bursaries**

Program code: UPBO-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.

**Awards for the University Community**

Awards are given in recognition of distinguished intellectual, cultural, social or athletic contribution to university life. Awards usually consist of monetary remuneration but may also come in the form of a prize or medal. Many of the following awards have been made possible by generous donations.

**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 Assistance. Both undergraduate and graduate students are eligible unless otherwise indicated.
- Undergraduate students must have achieved a minimum CGPA of 2.00 during the semester of their contribution and must not be on academic probation, or in the case of first semester or transfer students to their equivalent secondary school or college standing.
- Undergraduate students must be registered in a minimum of nine semester hours of normal graded courses in the semester of eligibility. Challenge, audit, and credit free courses are not considered. Students who register in fewer than nine semester 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 semester 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 Assistance 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 Assistance.
- Normally, only one intervening semester will be allowed between the semester in which the registered student made their contributions and the semester in which the award is adjudicated.
- Unless otherwise stated, awards are tenable only at Simon Fraser University for the semester 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 available each year to graduate and undergraduate aboriginal students attending Simon Fraser University who have a living 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 excellence in one or more of the following: academic, cultural, social or athletic contribution and overcoming personal or systemic barriers. Documentation supporting the student’s community connection, service and volunteer activities shall be submitted to Financial Assistance. The Senate Undergraduate Awards Adjudication Committee will make the award.

**Alumni Association Outstanding Student Leadership Award**

Program code: UPAO-167

Value: $2000

Awarded: Summer

Terms of reference: Granted to a 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 endeavour at SFU or in the broader community. The achievement may be in athletics or the arts, in service to the University or to the community at large. Nominations, including a letter and resume from the nominee and a supporting letter from an individual who can speak to 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 Awards Ceremony. Nominations or applications should be forwarded to the Director, Student Academic Resources 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.

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 placement 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.

B.C. Sugar Achievement Award
Program code: UEAO-526
Value: $5250
Awarded: Summer
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 recipient’s field; accomplishments 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: UEOA-081
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 you 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: UEOA-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.

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.

Gandi 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 faculties, is the most outstanding in the graduating classes in any faculty. Eligible candidates should have completed a minimum of 10 semester hours at Simon Fraser University. The award shall be made to the student who has maintained a high scholastic standing during no fewer than six semesters or the equivalent of 60 semester hours or more at Simon Fraser University.

Stephen Harold Edward Herring Prize
Program code: UEAO-048
Value: $1600
Awarded: Summer
Terms of reference: The Herring 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 cause 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 sent to the Director, Student Academic Resources by April 15th. The Herring Prize will be awarded at the Alumni Awards Ceremony in the following year. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Stephen Herring 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 semester to the University honor roll, mainly on the basis of excellent work completed in the previous semester. 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 semester hours at Simon Fraser University by the end of the semester being evaluated;
- must have completed at least 12 semester hours of credit in the semester being evaluated;
- must achieve a minimum semester GPA of 4.00 calculated on all normally graded courses completed in the semester being evaluated.

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
Nominations are to be made through Student Academic Resources by April 15th.

Dr. M. Sheila O’Connell Prize for Children’s Literature
Program code: UEAO-334
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.

Iain and Mary Ormsiaq 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: UPAQ-199
Value: $1000
Awarded: Summer
Terms of reference: The award will be granted to a 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 achievement 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 the Director, Student Academic Resources by April 15th.

Muslim Students’ Association Award
Program code: UPAQ-183
Value: $100
Awarded: Fall
Terms of reference: One award valued at $300 will be available to students in the Fall semester. 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 Professor 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 are to be made through Student Academic Resources, Office of the Registrar by April 15th.

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 the impact on the applicant. There can be no more than a one semester gap between the volunteer or work project activity and the awarding of the Samson Award. Nominations or applications should be forwarded to the Director, Student Academic Resources by April 15th.

Gordon M. Shrum Gold Medal
Program code: UPAQ-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 semester. 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 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: $500
Awarded: Fall
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 semester. 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 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 Piping Award
Program code: UUAO-006
Value: $600
Awarded: Fall, Spring
Terms of reference: To an undergraduate student who plays the bagpipe either as a solo piper or participation in a pipe band.

Simon Fraser University Pipe Band Memorial Award
Program code: UEAO-049
Value: $900
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 the Director, Student Academic Resources by April 15th.

William A. (Bill) Stewart Volunteer Leadership Award
Program code: UEAO-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 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 the Director, Student Academic Resources by April 15th.

Dr. Abe Unrau Memorial Co-op Prize
Program code: UEAO-039
Value: $1000
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 semester (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-operative education program.

Joan H. Walter Memorial Award
Program code: UEO-030
Value: $1600
Awarded: Summer
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: UEO-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 the Director, Student Academic Resources by April 15th.

Westcoast Coalition for Human Dignity Community Service Award
Program code: UEO-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 the Director, Student Academic Resources by April 15th.

Awards for Applied Sciences Students

Mark and Nancy Brooks Computing Science Innovation Award
Program code: UEO-052
Value: $800
Awarded: Fall
Terms of reference: Granted 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 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: UEO-155
Value: $1800
Awarded: Summer
Terms of reference: To a third or fourth year undergraduate student in Communication submitting 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: UEO-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 service 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: UEO-042
Value: $2000
Awarded: Fall
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: UPA-016
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 on the nomination of the Director of the School of Computing Science.

Engineering Science Undergraduate Student Project Award
Program code: UEO-535
Value: $100
Awarded: Fall
Terms of reference: Given annually for projects proposed by SFU Engineering Science undergraduate students. The project proposals submitted for consideration should contain a description of the project, Category as noted below, the benefits to Engineering Science students, the university or to industry, an implementation schedule including a deadline and a contact student who is registered, and a complete cost breakdown. The project can fall into one of four (4) categories that will be ranked according to the Rating Criteria (first Criteria being the highest).

Category A – Competition
• projects that will be entered to compete in competition
• rating criteria: pragmatic, cost effective, visionary

Category B – Entrepreneurial
• projects that expect to produce a workable prototype. A brief Business Plan should be included in the project proposal
• rating criteria: originality, usability, team oriented

Category C – Class
• projects that originated from an Engineering Science class or a special projects laboratory
• rating criteria: originality, usability, team oriented

Category D – Miscellaneous
• travel and projects not covered under Category A through C and/or purchase of Lab Equipment and/or teaching aids

The Award(s) will be granted by the Senate Undergraduate Awards Adjudication Committee on the nominations of the Funding Council and the Director of the School of Engineering Science.

Engineering Undergraduate Student Society Award
Program code: UEO-512
Value: $250
Awarded: Fall
Terms of reference: To an undergraduate student in Engineering Science who has demonstrated service to the Engineering Science 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. The recommendation should be a letter from the student or the EUSSS discussing the student’s involvement in and service to the Engineering Science student body. In addition, any member of the Engineering Science undergraduate student body may nominate a recipient to the Director of the School of Engineering Science. The Director will consult with the EUSSS prior to making the recommendation. The award will be made by the Senate Undergraduate Award Adjudication Committee on the nomination of the Director of School of Engineering Science.

National Bank Financial Award in Kinesiology
Program code: UEO-533
Value: $2000
Awarded: Fall
Terms of reference: Available in the fall to a student interested in developing a career in the health and fitness industry. Student must have an approved major in Kinesiology and have completed 90 hours of study...
course work with a cgpa of 3.0 and higher. Candidates must already be in possession of CPR, RFA and preferably, an Industrial First Aid certification. The successful candidate will work under the supervision of the Harbour Centre teaching and research Kinesiology lab a minimum of 5 hours per week in the awarded semester. The suitable candidates on completion of one semester of supervised study will be offered an opportunity to work independently as a consultant in the lab. Applications for the award will be received by the Director, School of Kinesiology in August each year. Selection will be made and announced on the 1st of September. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, School of Kinesiology.

Radio Station CHMB AM1320 Award in Communication
Program code: UEAO-523
Value: $2000
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 recent issues in Communication (e.g., relating to television or 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.

Rogers Communications Inc. Award in 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 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.

Ken Spencer SFU Business/Engineering Venture Plan Competition
Program code: UPAO-191
Value: $1000
Awarded: Fall

Terms of reference: The Ken Spencer SFU Business/Engineering Venture Plan is organized as part of undergraduate courses in offered in both the Faculty of Business Administration (BUS 477) and the Faculty of Applied Sciences (ENSC 201). To ensure that the venture plan includes technical and business aspects, teams must consist 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 polish presentation skills. As part of the courses BUS 477 and ENSC 201, teams of students for 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 semester 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 1st, 2nd and 3rd 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 nominations 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.

**Awards for Arts and Social Sciences Students**

**Archaeometry Prize**
Program code: UEAO-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 Archaeology. This prize will be awarded by the Senate Undergraduate Awards Adjudication Committee on the nomination of the faculty members involved in Archaeometry.

**Noel Archambault Memorial Award in Film**
Program code: UEAO-050
Value: $1500
Awarded: Summer

Terms of reference: Given 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 undergraduate student in the subject of Jane Austen, her life, works, or closely related social history. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the English Department. Applications and/or nominations are to be forwarded to the Dean of Graduate Studies office for adjudication.

**G.A.B.C. Chuck Bayley Memorial Award**
Program code: UEAO-519
Value: $1000
Awarded: Fall

Terms of reference: To student for the best essay by an undergraduate student for a research paper on the subject of Jane Austen’s life, her work, or closely related social history. The essay must be written in English and submitted to the English Department. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the English Department.

**B.C. Federation of Labour Award**
Program code: UPAO-190
Value: $500
Awarded: Fall

Terms of reference: The award will be given to an undergraduate student with an approved minor in Labour Studies, on the basis of satisfactory academic performance and involvement in volunteer activities. Candidates should demonstrate their involvement in volunteer activities by providing their resume and cover letter specific to these interests. A representative of the B.C. Federation of Labour will be invited to meet each award winner. This award is granted by the Senate Undergraduate Awards Adjudication Committee on the recommendation of the Director of the Centre for Labour Studies.

**British Columbia Psychological Association Award**
Program code: UPAO-005
Awarded: Summer

Terms of reference: A certificate of excellence will be awarded for outstanding achievement in the study of psychology to a graduating student who has completed the requirements for a Bachelor’s degree over the previous summer, fall or spring semester.

**Robert C. Brown Award**
Program code: UEAO-195
Value: $2000
Awarded: Summer

Terms of reference: To a student in the Faculty of Arts and Social Sciences who has completed a minimum of 60 credit hours at SFU. The recipient will have demonstrated a combination of outstanding academic achievement and outstanding potential for leadership in another endeavour at SFU. This may be in athletics, in service to the University, or in representing the University to the community at large. The nominations should include the nominee’s resumé and a letter of recommendation from a faculty member in the Faculty of Arts and Social Sciences. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair, Department in Research. The Department of French reserves the right to withhold one or both prizes in any given year.

**Bureau du Quebec Book Prizes in Quebec Studies**
Program code: UPAO-177
Value: $2000
Awarded: Fall

Terms of reference: To one top ranking graduate student in the Department of French having a concentration in Quebec studies within the Department’s French-Canadian course offerings, including Quebec literature and/or linguistics. The awards will be made by the Senate Undergraduate Awards Adjudication Committee and the Senate Graduate Awards Adjudication Committee on the recommendation of the Chair, Department in Research. The Department of French reserves the right to withhold one or both prizes in any given year.

**Bice Caple Awards**
Program code: UUAO-005
Value: $1000
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

Normally, the award may be held only once, but in no case more than one per academic year. Each recipient will be nominated by the Director of the School of the Contemporary Arts. The maximum award of $1,000 will be disbursed in two equal installments, one in the Fall semester and one in the Spring semester.
The Chan Sisters Foundation Non-Profit Co-op Employment Grant
Program code: N/A
Awarded: Fall Spring Summer
Terms of reference: The grant will subsidize Co-op students in the Faculty of Arts Program whose next Co-op work terms will be in not-for-profit organizations. The Chan Sisters Foundation Non-Profit Co-op Employment Grant will be administered by the Director, Co-operative Education Program.

William L. Cleveland Essay Prize in African Middle-Eastern Asian History
Program code: UEAO-053
Value: $200
Awarded: Summer
Terms of reference: To 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: $750
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 semester 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: $100
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 GPA 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.

Al Eisenring 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 Francophile 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. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Associate Director, FASS, Office of Francophone and Francophile Affairs.

Institute for the Humanities Travel-Study Award
Program code: UPAO-200
Value: $1500
Awarded: Spring Summer
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. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Associate Director, FASS, Office of Francophone and Francophile Affairs.

Nick Kravaritis 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.

Cliff Lloyd Memorial Award
Program code: UEAO-016
Value: $100
Awarded: Summer
Terms of reference: To an honors student in economics graduating with the highest CGPA on the nomination of the Department of Economics.

Barry and E. Anne MacDonald Asia-Canada Awards
Program code: UEAO-525
Value: $1500
Awarded: Summer
Terms of reference: Awards will be made to undergraduate 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.

Stephen McIntyre Book Prize in History
Program code: UPAO-018
Value: $400
Awarded: Summer
Terms of reference: To the top graduating student in history in recognition of academic excellence on the nomination of the Department of History Awards Committee.

Sean McLeod Memorial Award in Music
Program code: UPAO-180
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 2.8 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 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 Nystrom 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 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 semester 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 Chair of the Department for the Contemporary Arts Visual Arts Committee.

Philippa Poison 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 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-527
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-126
Awarded: Summer
Terms of reference: The Department of History wishes to recognize and encourage academic excellence with the award of a medal to the best history student in each graduating year. The award will be based on the best grade point average for upper level work. The prize will be granted by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Chair of the Department of History.

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-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 School for the Contemporary Arts Department Awards Committee.

Brian Williamson Memorial Award in Archaeology
Program code: UEAO-515
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 use of the Award, academic achievements, and relevance of travel to the applicant’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 Committees 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.
Awards for Business Administration Students

Peter R.B. Armstrong/Rocky Mountaineer Award for Entrepreneurship
Program code: UEAO-051
Value: $2500
Awarded: Summer
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: UEOA-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. A departmental nomination is required.

Dean’s Student Service Award
Program code: UUAO-200
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 semester 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 Award 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 involvement.

Simon Fraser University Co-operative Education Merit Award
Program code: UPAO-198
Value: $500
Awarded: Fall/Spring/Summer
Terms of reference: The award will be to a full-time undergraduate student who has demonstrated outstanding performance on a Co-Operative Education work placement focusing on business projects in any of the last three semesters. The award will be given upon the successful completion and return from the work placement. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Co-Operative Education.

SFU Accounting Student Association Award
Program code: UPAO-181
Value: $300
Awarded: Spring
Terms of reference: To a third or fourth year student in the Faculty of Business Administration with a concentration in accounting. The award is based on academic performance and extra-curricular involvement. The successful applicant should have a minimum CGPA of 3.0. Extra-curricular interests can include active memberships in clubs, volunteer experiences, sports activities and community involvement. Candidates should demonstrate their involvement in these activities by providing their resume and cover letter specific to these interests.

Ken Spencer SFU Business/Engineering Venture Plan Competition
Program code: UPAO-191
Value: $100
Awarded: Fall
Terms of reference: The Ken Spencer SFU Business/Engineering Venture Plan Competition is organized as part of undergraduate courses in offered in both the Faculty of Business Administration (BUS 477), and the Faculty of Applied Sciences (ENSC 201). To ensure that the venture plan 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 polish presentation skills. As part of the courses BUS 477 and ENSC 201, teams of students for 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 semester 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 1st, 2nd and 3rd 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 nominations 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.

Awards for Education Students

Jean G.K. Bailey Memorial Award
Program code: UEAO-004
Value: $500
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 semester to the outstanding student in each stream based on his/her academic accomplishments and overall performance during the completion of the Professional Development Program practs. 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: To a student in the Faculty of Education who has 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.

Phi Delta Kappa Scholarship in Education
Program code: UPISO-276
Value: $500
Awarded: Summer
Terms of reference: The award is given to undergraduate students in the Professional Development Program who have demonstrated overall excellence in their program of study. The scholarships will be awarded to students on the basis of overall excellence and contributions to the faculty, to the university and/or to the community. Candidates should include with their application a letter of recommendation in support of their service contributions. 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: Granted 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: UEAO-054
Value: $1000

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Awarded: Summer
Terms of reference: Awarded to a student who has demonstrated excellence in overall performance during completion of the Professional Development Program. Preference will be given to a student who has completed the program at an external site outside of the Lower Mainland region.

Awards for Science Students

Archaeometry Prize
Program code: UEAO-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 Archaeology. 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 semester of study or the equivalent thereof. 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: UEAO-008
Value: $75
Awarded: Summer
Terms of reference: Awarded to graduating students in Chemistry. Chemical Physics or Biochemistry for outstanding graduating 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: UEAO-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 semester 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 semester hours credit in each semester) 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 six semesters 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: UEAO-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 semester, the Spring semester of the award or the Summer semester 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 Management and Systems Science Program Steering Committee.

Department of Mathematics Awards
Program code: UEAO-017
Value: $50
Awarded: Spring
Terms of reference: Awards will be given to full-time students in the Department of Mathematics 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.

Putnam Awards
Program code: UPAO-024
Value: $100
Awarded: Spring
Terms of reference: Awarded by the Department of Mathematics and Statistics 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.

Rank | Award | Value
--- | --- | ---
P (Putnam fellow) | $350
N | $300
H | $250
I | $200
Top 100 | $100

Department of Statistics and Actuarial Science Awards
Program code: UEAO-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: UEAO-063
Value: $1000
Awarded: Fall
Terms of reference: To a full-time student in good standing in any faculty who has demonstrated high standards of leadership in the management or administration of SFU Athletic, Recreation or Intramural programs.

Bob Ackles Sports Administration Award
Program code: UEAA-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: UEAA-060
Value: $800
Awarded: Fall
Terms of reference: To a 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 Wrestling Award
Program code: UEAA-087
Value: $700
Awarded: Fall
Terms of reference: The award is based on athletic merit in the wrestling program and will be awarded to students in good academic standing who are on the Simon Fraser wrestling team and have demonstrated the required level of athletic performance.
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: UPAA-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: UEAA-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: UEAA-002
Value: $500
Awarded: Fall Spring Summer

Terms of reference: A number of awards are available
each semester 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 2.0. Awards will be made by the Senate
Undergraduate Awards Adjudication Committee
on nominations from the Director of Recreational
Services and Athletics.

Athlete Assistance Awards
Program code: UUAO-105
Value: $250
Awarded: Fall Spring Summer

Terms of reference: A student registered in
program of study in any faculty who has
achieved outstanding ability in golf and meet the academic
requirements. Preference will be given to residents of the
Lower Mainland of BC.

Athletic Entrance Awards
Program code: UUAO-104
Value: $1000
Awarded: Fall Spring Summer

Terms of reference: Four awards valued at $1000 are available
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 Summer

Terms of reference: The purpose of the Athletic and
Recreation Awards is to recognize significant
colleagues to the athletic activities of Simon Fraser
University, or to recognize excellence in
outstanding amateur athletic activities. Up to 50 awards valued at
$1000 each are available to students who:
• have achieved a minimum grade point average of
2.00 in the previous semester and must not be on
academic probation, or, in the case of a first
semester or transfer student, possess an equivalent
good 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.
Nominations 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 $3,000 self-perpetuating athletic award has been
established by the Bank of Nova Scotia.

BC Athlete Assistance Program
Program code: UXAU-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 Spring Summer

Terms of reference: To students who meet the academic
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 a member of the Varsity 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 on the nomination of the Director, Recreational Services and Athletics.

Canadian Airlines International Ltd Award
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,
athletic 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 Wrestling Coach.

Best Facilities Services Ltd Athletic Award
Program code: UEAA-017
Value: $1000
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 a student active in soccer at
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 Anthon MacLennan Award in Golf
Program code: UEAA-035
Value: $350
Awarded: Fall Spring Summer

Terms of reference: To an undergraduate student in
any faculty who has demonstrated high standards of leadership and performance as a team member of the Varsity Golf Team. The award will be made by the Senate Undergraduate Awards Adjudication Committee on the nomination of the Director, Recreational Services and Athletics.

Canadian National Railways Athletic Award
Program code: UEAA-019
Value: $1000
Awarded: Fall Spring Summer

Terms of reference: To a student active in wrestling at
Simon Fraser University who also 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 Summer

Terms of reference: To a student artist in good
academic standing who meets the athletic 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 student in good academic
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

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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 semester. The recipients must be in good academic standing.

Moira Colbourne Field Hockey Award
Program code: UEA-018
Value: $800
Awarded: Fall Spring
Terms of reference: The award will be given to student athletes 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: UEA-017
Value: $200
Awarded: Fall Spring
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 Senior Graduation Award
Program code: UEA-079
Value: $1000
Awarded: Spring
Terms of reference: To a senior SFU varsity athlete with at least 90 semester hours of which 48 semester 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 summer, fall or spring semester to offset the tuition costs of the graduating year. The award must be granted within one year of notification. The W. Lorne Davies Senior Graduation Award’s purpose is to fulfill the philosophy of W. Lorne Davies that all varsity athletes should achieve graduation.

W. Lorne Davies Athletic Excellence Award
Program code: UEA-050
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.

Larry K Davis/Bravo International Services Corp. PNB Award in Golf
Program code: UEA-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: UEA-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: UEA-012
Value: $250
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 Field Hockey team.

Jim Forsythe Olympian Award
Program code: UEA-069
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: UEA-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.

Rick Hansen Athletic Award
Program code: UUAO-103
Value: $1400
Awarded: Fall Spring Summer
Terms of reference: To a physically challenged student athlete who meets the general award requirements.

Dr. T. Peter Harmon Wrestling Award
Program code: UEA-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: UEA-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: UEA-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: UEA-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: UEA-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: UEA-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: UEA-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: UEA-007
Value: $500
Awarded: Fall Spring Summer
Terms of reference: One or more awards, are available to full-time students in good academic standing. These awards are based on outstanding athletic merit in football. Preference will be given to students from Vancouver Island.

Keg Restaurants Ltd Athletic Award
Program code: UEA-026
Value: $200
Awarded: Fall Spring Summer
Terms of reference: To an athlete who meets the academic requirements and demonstrates outstanding ability.

Nick Kiniski Wrestling Award
Program code: UEA-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: UEA-029
Value: $900
Awarded: Fall Spring Summer
Terms of reference: To a first year student at the Simon Fraser University men’s basketball team. The award will be disbursed over two semesters, valued at approximately $450 per semester.

Labatt Breweries Award in Soccer
Program code: UPA-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 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: 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 current full-time student in any faculty on the SFU 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
Program code: UPAA-052
Value: $1000
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 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: 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.

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.

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.

Rae/Suart Alumni Athletic Award in Men’s Soccer
Program code: UEAA-049
Value: $1000
Awarded: Fall, Spring Summer
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.

Royal Canadian Legion Branch #2
Program code: UEAA-054
Value: $50
Awarded: Fall, Spring Summer
Terms of reference: To a student athlete who meets the academic requirements and exhibits athletic ability.

Royal City Travel Limited Athletic Award
Program code: UEAA-009
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: A number of awards will be offered to both male and female student-athletes at SFU, up to one award per varsity team. The recipients must be full-time students in good academic standing who demonstrate outstanding ability in varsity athletics.

Scott Paper Alumni Endowment Award
Program code: UEAA-013
Value: $500
Awarded: Fall, Spring Summer
Terms of reference: To a full or part time student in good standing who is on the football team at Simon Fraser University. The award is based on athletic merit in football.

D.B. Perks & Associates Ltd. Award in Swimming and Diving
Program code: UEAA-041
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, 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 Football team. Academic accomplishment may be considered in selection of the recipient.

Terms of reference: To a student in any faculty who is on the football team at Simon Fraser University. The award may be granted to both male and female student-athletes at SFU, up to one award per varsity team. The recipients must be full-time students in good academic standing who demonstrate outstanding ability in varsity athletics.
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 minimum 2.5 cumulative GPA.

Servitpetrol 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 semester 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: UEA-037
Value: $500
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: UEA-063
Value: $900
Awarded: Fall Spring
Terms of reference: To an undergraduate student involved in the University soccer program.

SFU Athletic Award
Program code: UEA-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: UEA-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: Recipient must be a full-time student in good standing and a member of Simon Fraser University’s men’s varsity golf team. He must be a graduate of Canadian junior golf and maintain throughout his four years of eligibility a level of play comparable with that of the top six team members. If a recipient forfeits Year 2-4 portion of the award, the remaining portion may be awarded to another member of the golf team on the nomination of the head golf coach. The award schedule will be as follows:

- Year 1 – $5,000
- Year 2 – $4,000
- Year 3 – $3,000
- Year 4 – $2,000

Simon Fraser University Women’s Soccer Endowment Award
Program code: UEA-064
Value: $100
Awarded: Fall Spring Summer
Terms of reference: Based on outstanding athletic merit, to a student playing women’s soccer at the University. The award will be granted to a full-time student in satisfactory academic standing.

David Thomas Smith Annual Memorial Award in Men’s Soccer
Program code: UPAA-023
Value: $1000
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 Men’s Soccer team. Academic accomplishment may be considered in selection of the recipient.

Softball Associations Presidents’ Award in Women’s Softball
Program code: UEA-081
Value: $500
Awarded: Fall Spring Summer
Terms of reference: To full- or part-time student in good standing who is attending Simon Fraser University and 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 be in good standing with Softball B.C. and their sponsoring association. The Award may be renewed annually if the athlete remains a member of the SFU women’s intercollegiate softball team.

Sandra Spence Memorial Wrestling Award
Program code: UEA-033
Value: $1500
Awarded: Fall Spring
Terms of reference: To students who are members of the Simon Fraser wrestling team and who meet the academic requirements.

Victor V. Spencer Award in Football
Program code: UEA-046
Value: $500
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 Football team. Academic accomplishment may be considered in selection of the recipient.

Bob Spray Rugby Awards
Program code: UEA-025
Value: $500
Awarded: Spring
Terms of reference: 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 extraordinary amateur rugby activities. Students must have achieved a minimum grade point average of 2.00 in the previous semester during tenure of the award. Applications should be submitted to the Simon Fraser University rugby coach in the previous fall semester.

Stan Stewardson Award in Men’s Basketball
Program code: UEA-109
Value: $500
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 Men’s Basketball 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.

Student Athlete Support Award
Program code: UEA-006
Value: $250
Awarded: Fall Spring Summer
Terms of reference: Awards for student athletes. Must have minimum CGPA of 2.00, must be full-time students, and must be eligible to compete in their sport.

Annis Stukus Award in Football
Program code: UEA-040
Value: $1000
Awarded: Fall Spring
Terms of reference: To a student 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.

Lynn K. Sully Athletic Award
Program code: UEA-010
Value: $200
Awarded: Fall Spring Summer
Terms of reference: To athletes who demonstrate outstanding athletic ability and meet the academic requirements. This endowment is to provide two awards, one for football and one for basketball.

Florence and Lynn Sully Basketball Award in Men’s Basketball
Program code: UEA-021
Value: $500
Awarded: Fall Spring Summer
Terms of reference: To student athletes. Must in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the varsity men’s basketball team. Academic accomplishment may be considered in selection of the recipient.

Lynn and Florence Sully Award in Women’s Basketball
Program code: UEA-043
Value: $900
Awarded: Fall Spring Summer
Terms of reference: To student athletes. Must 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. Preference will be given to students with high academic standing.

Team Skyline Ltd Athletic Award
Program code: UEA-031
Value: $400
Awarded: Fall Spring Summer
Terms of reference: An award is available to an athlete who exhibits outstanding athletic ability as well as maintains satisfactory academic performance.

Brit Townsend Women’s Track and Field Award
Program code: UEA-083
Value: $600
Awarded: Fall Spring Summer
Terms of reference: To a student in good academic standing in any faculty who has demonstrated high standards of leadership and performance as a team member of the women’s track and field team at Simon Fraser University. Based also on athletic merit in track and field (preferably distance running).

Barbara J. Towriss Award in Women’s Basketball
Program code: UEA-039

Simon Fraser University 2006 · 2007 Calendar
Award may be split between the fall and spring outstanding athletic ability on the SFU women’s student, in good academic standing, who exhibits sponsored by Lis Welch, will be granted to an SFU Terms of reference: The Aqua-demic Award, Awarded: Fall Spring Summer Value: $1000

Women’s Athletic Awards (She Can Play!) Program code: UEAA-091 Value: $100

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
Terms of reference: To an SFU student who exhibits outstanding athletic merit on the SFU Track and Field and who maintains a satisfactory academic standing. $2,000 in total will be awarded annually in two installments. Preference will be given to students who are members of the Valley Royals Track 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 track and field team member from British Columbia or from Canada. The recipient may be granted the Valley Royals Award more than one time provided all criteria noted above are met. Vancouver Golf Club/MCL Motors Golf Tournament Award in Golf Program code: UEAA-066 Value: $50

Terms of reference: Granted to a full-time student in good standing who is on the golf team at Simon Fraser University.

Water Polo Award Program code: UEAA-082 Value: $250

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 Aqua-demic Award Program code: UPAA-019 Value: $1000

Terms of reference: The Aqua-demic Award, sponsored by Lis 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

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 Awards Program code: UEAA-045 Value: $1000

Terms of reference: To a member of the Simon Fraser University women’s intercollegiate softball team and must be a student at Simon Fraser University. The recipient must have been a member of the Renegade softball organization (South Surrey White Rock) for at least two complete seasons.

Women’s Athletic Awards (She Can Play!) Program code: UEAA-091 Value: $100

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.

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 semester hours of normal graded courses in the semester of application. Challenge, audit, and credit free courses will not be considered.

• Graduate students must be registered for full-time program.

• Students must apply on the Simon Fraser University Emergency Loan application form and be interviewed by a Financial Aid representative. 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 semester indicated on the notice.

Canadian Merit Scholarship Foundation
Deadline: October 15

Terms of reference: The Canadian Merit Scholarship Foundation (CMSF) annually awards three types of scholarships to students entering university from secondary school who have demonstrated academic excellence and the qualities of character, leadership and service to their school and the community. The CMSF National Award includes a cash grant of $5000

Externally Administered Entrance Scholarships

The following entrance 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.

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.

Web: www.apeg.bc.ca
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 parents’ 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 study of 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: Visit Student Services Branch web site for details.

Web: www.bcsap.bc.ca
per year (for a maximum of four years) from the Foundation and full tuition from the participating universities. The CMSF Regional Award is a non-renewable grant between $1,000 and $2,500 offered to a student attending any accredited university in Canada. The CMSF Provincial Award is a non-renewable grant between $500 and $1,000 offered to a student attending any accredited university in Canada.

Contact: Scholarship 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. Successful Terry Fox scholars are expected to participate in programs such as volunteer service, yearly meeting and annual reports.

Contact: Terry Fox Humanitarian Award Program, Simon Fraser University, 8888 University Drive, Burnaby BC, V5A 1S6, Tel: (604) 291-3317, 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 to $1,000 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 1S6, Tel: (604) 291-3317, Fax: (604) 291-3311. Web: www.terryfox.org
Email: terryfox@sfu.ca

Harry Bridges Entrance Scholarship (ILWU)
Deadline: June 30
Terms of reference: Four scholarships of $150 each are offered 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.

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 Naval 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
Email: national@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 sons or daughters of members 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 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.cafinance

Carol Anne Letheren Leadership and Sport Scholarship
Deadline: January 31
Terms of reference: The scholarship will support women who demonstrate the potential to: (a) achieve academic success, (b) be an accomplished athlete in high school, community or provincial level competitive sports, (c) be an accomplished athlete in high school, community or provincial level competitive sports, or (d) be a female student presently enrolled at a Canadian high school in their graduate year, or (e) be a Canadian citizen or permanent resident.

Contact: Canadian Olympic Association, 21 St. Clair Avenue East, Suite 900, Toronto ON, M4T 1L9, Tel: (416) 962-0262, Fax: (416) 967-4902. Web: www.olympica.org

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 the Lower Mainland, be grade 12 students who expect to graduate with a 3.0 (B) grade point average or higher, attend a university or community college or technical school, and pursue studies leading to a university degree or college diploma, submit a typewritten letter of no more than 400 words, double-spaced, explaining why he/she is qualified to be the appropriate candidate for the scholarship.

Contact: Sergio Lovison Foundation, c/o 5576 Argyle Avenue, Vancouver BC, V5P 3J6.

TD Canada Trust Scholarship for Outstanding Community Leadership
Deadline: October 31
Terms of reference: Candidates must be Canadian citizens or permanent residents. They must be graduating from their last year of high school (and/or CEGEP in Quebec) and have demonstrated involvement in community leadership.

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.cafinance

Retail Wholesale Union, Local 517, Scholarship
Deadline: June 30
Terms of reference: A scholarship of $250 is offered to dependents 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 her/his 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.
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
Email: scholarship@earthday.ca

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

Externally Administered 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 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 degree granting 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: National Aboriginal Achievement Foundation, 70 Yorkville Avenue, Suite 33A, Toronto ON, M5R 1B9, Tel: (416) 926-0775, Fax: (416) 926-7554. Web: www.naaf.ca

All Nations Trust Company/All Nations Development Corporation Endowment Fund Awards
Deadline: September 14
Terms of reference: The purpose of these awards is to recognize individuals who are goal oriented, dedicated and have demonstrated good citizenship within their communities. This award is open to status, non-status, or Metis students who currently live within or are originally from one of the following five Tribal Regions: Kootenay, Lillooet, Shuswap, Thompson and Okanagan. These awards are designed to reward academic achievements and assist Aboriginal students in their pursuit of post-secondary education.
MESSENGER AWARD: Students must be graduating from high school in the current year and registered in a post-secondary institute for the following terms as a full time student.
POST SECONDARY AWARD: Students must be registered and attending a post-secondary education institution.
Application package should include: an application form, a resume, a statement or letter describing career objectives, goals, involvement in activities at school or community and leadership skills, a transcript and two letters of reference, one personal and one professional.
Contact: All Nations Development Corporation, Suite 208 West, 345 Yellowhead Highway, Kamloops BC, V2H 1H1, Tel: (250) 314-1573, Fax: (250) 372-2585, Toll Free: 1-888-562-5333.
Web: www.antco.bc.ca Email: andevco@antco.bc.ca

ABA Legal Opportunity Scholarship Fund
Deadline: March 3
Terms of reference: The American Bar Association Legal Opportunity Scholarship Fund will award $5000 of financial assistance annually to each scholarship recipient attending an ABA-accredited law school. The mission of the Legal Opportunity Scholarship Fund is to encourage racial and ethnic minority students to apply to law school and to provide financial assistance to ensure students have the opportunity to attend law school for three years. Applicants should submit an application form, a personal statement and letters of recommendation.
Contact: ABA Legal Opportunity Scholarship Fund, Fund for Justice and Education, American Bar Association, 780 N. Lake Shore Dr., Chicago, IL 60611, Tel: (312) 988-5415. Web: www.abanet.org/fje
Email: mastronardi@staff.abanet.org
Dr. Aimee August Scholarship
Deadline: November 30
Terms of reference: The Dr. Aimee August Scholarship is awarded annually to a SCES/SFU student of Native ancestry who best demonstrates exceptional scholarship combined with an appreciation for Native language and culture. Applicants must be of Native ancestry and registered as full-time students (three courses or more). The award is restricted to students who have successfully completed a minimum of 24 credit hours in the SCES/SFU program. Candidates will be evaluated according to the following criteria:
• Applicants must have a cumulative GPA of 3.0 or higher,
• Applicants must show an appreciable financial need.
• Applicants must have a cumulative GPA of 3.0 or higher,
• Applicants must show an appreciable financial need.
• Applicants must have a cumulative GPA of 3.0 or higher,
• Applicants must have a cumulative GPA of 3.0 or higher,
• Applicants must demonstrate sensitivity to the unique 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, SCES/SFU Joint Steering Committee, 355 Yellowhead Hwy., Kamloops BC, V2H 1H1.

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 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 Paraplegic Foundation Scholarships/Bursaries
Deadline: July 31
Terms of reference: Each year the BC Paraplegic Foundation gives out a number of scholarships and bursaries to needy students with disabilities attending post-secondary institutions in British Columbia. The awards are available to members of the BC Paraplegic 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 Paraplegic Association, 780 SW Marine Drive, Vancouver BC, V6P 5Y7, Tel: (604) 323-3601, Fax: (604) 324-3611.

J. Armand Bombardier Internationalist Fellowship (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 disciplines of study and are awarded on a competitive basis to outstanding university graduates of proven academic merit and demonstrated personal suitability. Application guidelines and forms are available on the Internet at CBIE’s website.
Contact: J. Armand Bombardier Internationalist Fellowships, Canadian Bureau for International Education, 220 Laurier Avenue West, Suite 1550, Ottawa ON, K1P 5Z9, Tel: (613) 237-4820 ext. 234, Fax: (613) 237-1073.
Web: www.cbie.ca Email: SMelanison@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, Boswer 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. No applications will be accepted directly from students.

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: gjallagh@aucc.ca

Canadian Engineering Memorial Foundation I Inco Limited Masters Engineering Scholarship
Deadline: January 20

Terms of reference: Two scholarships for women enrolled full-time in an accredited Masters engineering program. Successful applicants 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.cemfinfo.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 has 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, or Education specializing in those areas.

Contact: C.F.U.W. - Parksville/Qualicum, Secretary, James Craig Reid Memorial Scholarship Trust, PO Box 113, Qualicum Beach BC, V9K 1S7.

Web: www.cfuwq.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 and deafened students registered in full time program at a recognized Canadian college or university, in any area of study, with the ultimate goal of obtaining a diploma or degree. Applicants are requested to request the criteria for eligibility and to provide all information required.

Contact: Canadian Hard of Hearing Association Scholarship Program, 2435 Holly Lane, Suite 205, Ottawa ON, K1V 7P2, Tel: (613) 526-1284, Toll Free: 800-287-7280. Web: www.chha.ca

Canadian Japanese – Mennonite Scholarship Deadline: April 1

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), c/o 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 will 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 industries (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 5E7, Tel: 613-237-6815. 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, #G-10, Etoibcokie ON, M9C 4W7, Tel: (416) 620-9320, Fax: (416) 620-7199. Toll Free: 1-800-561-1359. Web: www.cssa.com Email: cssa@cssa.com

Canadian Water Resources Association Scholarship
Deadline: Fall

Terms of reference: Four scholarships are offered to graduate students whose programs of study focus on 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 methodologies 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, Micrcell, Telecommunications, Rogers & T Wireless and TELUS Mobility – have established a scholarship fund to benefit students at the master or Ph.D 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 are intended 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, V5G 1H1, Tel: (604) 438-4240, Fax: (604) 438-8576. 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, V9A 6X5, Tel: (250) 483-7000 (Greater Victoria), (604) 517-7000 (Lower Mainland), Toll-Free: 1-888-517-7000. Web: www.coastcapitalavings.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, V6B 1S9, Tel: (604) 874-7148

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...
necesary 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 and 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.


Envision Credit Union Education Award

Deadline: April 1

Terms of reference: Education awards are available to students who are members of Envision Credit Union. Students must have completed a full-time course at a recognized post-secondary institution. The scholarship is open to undergraduate and graduate students.

Contact: Envision Credit Union, 10600 107 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 2

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 intent 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.

Contact: Orville Erickson Memorial Scholarship, c/o Secretary Canadian Wildlife Foundation, 350 Michael Cowpland Drive, Kanata, ON K2M 2W1.

Web: www.cwf-tcf.org

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 received $5000 and students pursuing a college diploma will receive $3,500. 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

Fessenden-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 Lounks Forster Public Health Scholarship Fund

Deadline: September 9

Terms of reference: Candidates must be full-time students engaged in post-secondary 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 C.V., proof of acceptance or enrollment in a recognized diploma 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.vancouvercouncil.vbc.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 the 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 be involved in volunteer activities or graduate in the field of the award.

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 or University of Victoria, BC Institute of Technology or a BC college. Applicants must be full-time Canadian citizens or permanent residents. The award is $3,500 per year. Successful Terry Fox scholars are expected to be involved in volunteer activities or graduate in the field of the award.

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

Geomatics Canada Scholarship Program – Canadian Institute of Geomatics

Deadline: March

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 who 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) 224-9581, Fax: (613) 224-9577.

Web: www.cig-acsig.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 enrolled in a recognized diploma program in agriculture and/or journalism or communications. The successful applicant will have 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.herofonds@herofonds.ca

Global Television Network Scholarship Award for a Canadian Visible Minority Student

Deadline: June 3

Terms of reference: This annual scholarship award is offered to a Canadian student from a self-identified visible minority, and provides educational assistance towards the pursuit of a career in broadcasting. The award, valued at about $5,000, covers all tuition fees and textbooks for one scholastic year of a radio and television arts program or journalism program at a recognized Canadian university or college, commencing in the fall.

Eligibility criteria:

• Canadian student who is from a self-identified visible minority. Members of visible minority groups are persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour.

• 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

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, commencing in the Fall. The program is four or four

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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, PO Box 242, Toronto ON, M3C 2A2, Tel: 1-800-387-8001, Fax: (416) 442-3377.
Web: www.canada.com

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 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- or part-time student enrolled in a 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.johngyleseducationcenter.com

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.pfcanada.ca

John & Lois Lamont Graduate Scholarship – Planned Parenthood Federation of Canada

Deadline: April 29

Terms of reference: The scholarship is open to Canadian citizens and/or immigrants who have graduated from an accredited 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.pfcanada.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 enrol in a full program of studies.

Contact: Award #00588: 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 Scruon Memorial Scholarship (ILWU Local 506)
Deadline: June 30

Terms of reference: A $750 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 enrol 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 enrol 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) 502-2250. Web: www.interiorlogging.org Email: info@interiorlogging.org

Japanese Government (Mext) Scholarship
Deadline: June 10

Terms of reference: The Monbusho (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 Monbusho 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) 684-5886, ext. 370, Fax: (604) 684-6839.
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.bbpa.org Email: scholarships@bbpa.org

Jewish Women International of British Columbia Scholarship
Deadline: June 30

Terms of reference: Two scholarships of $500 each are offered to single, married, or engaged 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 institutions. Application must be accompanied by a transcript of all post-secondary studies completed. Contact: Award #00581: 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) 822-6829. Web: www.students.ubc.ca/finance

Earl Kinney Memorial Scholarship
Deadline: June 30

Terms of reference: A scholarship of $750 is offered by the Graphic Communications International Union, Local 525 M, to students entering the second or higher year of a full academic program at studies at the University of British Columbia, the University of Victoria, Simon Fraser University or Trinity Western University. An applicant must be a member, or the son, daughter or legal ward of a member in good standing and must enclose a letter from the Union attesting to their eligibility. Contact: Award #577: 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) 822-6829. Web: www.students.ubc.ca/finance

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, Inuvi or Metis, a full time 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, Martin 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 candidates must be full-time students residing at a Canadian university who are interested in the processes that contribute to the creation, maintenance and overcoming of conditions that diminish the quality of life and opportunities of children. 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 relevant 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 an undergraduate degree; up to $1,000 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) 964-3614, 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 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: The Law Foundation of Newfoundland, Murray Premises, 2nd 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/lawfoundationnl/

Lotus Light Charity Society 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, resume 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, #200-357 King Street West, 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: Mattinson Awards Program, Association of Universities and Colleges of Canada (AUCC), 350 Albert St., Suite 600, Ottawa ON, K1R 1S9, Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca Email: awards@aucc.ca

The William McCallum Memorial Scholarship
Deadline: April 30

220 Laurier Ave. West, Suite 1550, Ottawa ON, K1P 5Z9, Tel: (613) 237-4820, ext. 242, Fax: (613) 237-1073.
Web: www.cbie.ca Email: fiapage@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 Post-graduate Studies, School of Law, University of Manchester, Oxford Road, Manchester, M13 9PL, England, Tel: (0161) 275-3563, Fax: (0161) 275-3579.
Web: les.manchester.ac.uk/law Email: pg-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 two years 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 - Maritimes, 70 King Street, Suite A, Moncton NB, E1C 4M6, Tel: (506) 855-8800, Fax: (506) 855-8500. Web: www.justaddmilk.ca

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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 McClure Scholarship Committee, Dawson College, 3040 Sherbrooke St. West, Westmount QC, H3Z 1A4, Tel: (514) 931-8731, local 1348, Fax: (514) 931-5818.

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 on the basis of satisfactory performance and 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, NCADA Foundation, PO Box 16428, Cleveland Ohio 44116 USA, Tel: (440) 892-4000, Fax: (440) 892-4007.

Web: www.ncadascholarship.org

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) 593-5897.

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 ethnocultural 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 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.italianculture.ca

Email: info@italianculturalcentre.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 Scholarships

Deadline: August 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 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

Email: national@navyleague.ca

Nuu-Chah Nulth Post-Secondary Scholarships

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 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.nuchahnuluht.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 be enrolled 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 4500, 4th Floor, 189 Red River Rd, Thunder Bay ON, P7B 6G9, Tel: (807) 343-7257, 1-800-465-3957.

Web: osap.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 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, 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), 330 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 4H7.

Email: info@poulincorporations.com

Prospera 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

Deadline: June 30

Terms of reference: This scholarship is awarded 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 BCPWFA 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://pwbac.cpwa.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.ca

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 judgement.
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.cnib.ca Email: awards@cnib.ca

Queen Elizabeth II Silver Jubilee Endowment Fund For Study in a Second Official Language Award Program
Deadline: March 1
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 and in a milieu in which that language predominates. All disciplines - except translation - are eligible. 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.
Contact: Canadian Awards Program, International and Canadian Programs Division, Association of Universities and Colleges of Canada (AUCC), 350 Albright St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745. Web: www.aucc.ca 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 a graduate:

• 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/students/student/sf/awards/sdq2.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 6J6, 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 further education 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, V5J 1V6, Tel: (604) 736-0368, Fax: (604) 736-3154. 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 open to a student who is a graduate of the University of Oxford, England. They are granted for two years, with the possibility of a third year. Scholars 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 attainments; fondness and success in outdoor sports; qualities of truthfulness, courage, devotion to duty, capacity for industry 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, 1550 Colborne Street, Suite 600, Toronto ON, M5E 1E6 or from the Provincial Secretaries. (Residents of Newfoundland) Contact S. Ann Colborne, FMD, The Rhodes Scholarships Trust, 154 leMarchant Road, St. John’s NL, A1C 5B8, Tel: (709) 777-5219, (709) 777-8449.

Baxter and Alma Ricard Foundation Scholarship
Deadline: March 1
Terms of reference: The Foundation Ricard is offering scholarships to French-Canadian students to enable them to pursue a graduate or post-graduate education in any field of studies, at a recognized university of their choice in the world. Candidate must be at least 21 years old, a francophone Canadian living in a linguistic minority situation and distinguish themselves by their academic performance and personal qualities.
Contact: 225, rue Metcalfe, bureau 407, Ottawa ON, KP2 1P9, Tel: (613) 236-7065, 1-877-236-7065, Fax: (613) 236-3718. Web: www.fondationricard.com

Rotary Foundation Ambassadorial Scholarships
Deadline: unknown
Terms of reference: The Rotary Foundation offers three types of scholarships: the Academic-Year, the Multi-Year Scholarship and the Cultural Scholarship. The applicants must initially apply through local Rotary Clubs. Not all Rotary clubs will offer scholarships every year, nor will all types of scholarships necessarily be available in a given year. Interested individuals should contact their local Rotary club to obtain application forms and inquire about the availability of scholarship types.
Contact: The Rotary Foundation of Rotary International, One Rotary Center, 1560 Sherman Avenue, Evanston IL, 60201 USA. Web: www.rotary.org Email: scholarshipinquires@rotaryintl.org

Royal Canadian Geographical Society
Deadline: January 31
Terms of reference: The Royal Canadian Geographical Society (RCGS) is sponsoring 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 an master’s level program. The RCGS studentship 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 6J6, 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

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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, course fees 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, Ontario L6J 1S7, Tel: (905) 849-9700, Toll Free: 1-800-263-0009, Fax: (905) 845-7040.
Web: www.rcga.ca Email: rcga@rcga.org

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 include 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: Chair, Betty Spaldon Educational Trust Fund, 6126-141 Ave, North York, Ont., M3C 1B9, Tel: (416) 994-1234, Fax: (416) 994-1235.
Web: www.cahtnet.org Email: caht@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 Paul W. Wildman Scholarship Program. These scholarships provide up to full tuition to members of the Southwestern entering class who have demonstrated exceptional academic promise. 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 Wildman Scholarship should consult the Office of Admissions and financial aid application processes as outlined in the Southwestern catalog.

Contact: Office of Admission, Southwestern University School of Law, 675 S. Westmoreland Avenue, Los Angeles, CA 90005, USA. Tel: (213) 736-7677.
Web: www.swlaw.edu Email: admissions@swlaw.edu

Paul W. Wildman 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 Paul W. Wildman Scholarship Program. These scholarships provide up to full tuition to members of the Southwestern entering class who have demonstrated exceptional academic promise. 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 Wildman Scholarship should complete and return the Interest Form and proceed with the general admissions and financial aid application processes as outlined in the Southwestern catalog.

Contact: Office of Admission, Southwestern University School of Law, 675 S. Westmoreland Avenue, Los Angeles, CA 90005, USA. Tel: (213) 736-7677.
Web: www.swlaw.edu Email: admissions@swlaw.edu

E.M. (Betty) Spaldon Education Fund
Deadline: July 31

Terms of reference: The Betty Spaldon Fund is geared towards 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 their interest obtaining an education in the field, a resume and transcripts from any secondary and post-secondary institutions attended.

Contact: Chair, Betty Spaldon Educational Trust Fund, BC Road Builders and Heavy Construction Association, 307-8678 Greenall Avenue, Burnaby BC. Tel: (604) 436-0220, Fax: (604) 436-2827.
Web: www.roadbuilders.bc.ca Email: info@roadbuilders.bc.ca

CNST Scholarships in Northern Studies – Canadian Northern Studies Trust
Deadline: January 30

Terms of reference: The Canadian Northern Trust 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 area, 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: October 15

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 environmental 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, 4330 Kingsway, Burnaby BC, V5H 4B8, Attention: Mike Stringer, Tel: (604) 436-6823, Fax: (604) 436-6811.
Web: www.ecowaste.swanabc.ca

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 and research study/ 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 1S9, Tel: (514) 938-0811, Fax: (514) 938-0046.
Web: www.trudeaufound.ca Email: tinfo@trudeaufound.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, Enrolment Services, 1036-1874 East Mall, Vancouver BC, V6T 1Z1, Tel: (604) 622-6292, Fax: (604) 622-6292.
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 submit an online application to the University’s Admissions Office. The deadlines are 1st December and 21st February for the Spring 2007 intakes. For more information, visit the University’s website.

Web: www.ucl.ac.uk

The Natural Resources Canada Scholarships in Resource Management Programme Deadline: October 1

Terms of reference: The Natural Resources Canada awards up to 25 scholarships each year to Canadian citizens or permanent residents who wish to pursue studies in fields related to environmental engineering or the natural resources sector. Applicants must be registered in full-time post-secondary programs leading to a degree or certificate. The minimum required grade point average to be eligible for a Natural Resources Canada Scholarship is 75.

Contact: GVRD - Policy & Planning Department, 4330 Kingsway, Burnaby BC, V5H 4B8, Tel: (604) 436-6823, Fax: (604) 436-6811.
Web: www.ecowaste.swanabc.ca

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 and research study/ 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

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 and research study/ 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
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 WCIE 6BT, Tel: +44 171 380 7708, Fax: +44 171 380 7380. Web: www.ucl.ac.uk/scholarships Email: international@ucl.ac.uk

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 institutes: 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; a copy 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, VSZ 4N6, Tel: (604) 717-3016, Fax: (604) 257-8751.

Vancouver Mycological Society Deadline: unknown
Terms of reference: The Vancouver Mycological Society would like to make available the sum of $400 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, the candidates must indicate willingness to give a presentation on their research to the Vancouver Mycological Society at one of the regular meetings.
Contact: Vancouver Mycological Society, 101-1001 West Broadway, Vancouver BC, V6H 4E4, Tel: (604) 988-9390 or (604) 322-0074. Web: www.vannyc.com Email: info@vannyc.com

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.
Contact: Vancouver Korean-Canadian Scholarship Foundation, 201B – 1194 Lansdowne Drive, Coquitlam BC V3E 1J7. Web: www.vkscf.org Email: info@vkscf.org

Geraldo Donato Vertone Scholarship Deadline: August 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 of 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, two letters of references (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) 525-0146. Web: www.villagecu.com Email: info@villagecu.com

Bridget Walsh Scholarship for Single Parent Irish Women Deadline: October 15
Terms of reference: The Bridget Walsh Scholarship was created from the royalties of Sheelah Conway’s book The Faraway Hills are Green; Voices of Irish Women 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, Sheelah 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, Bridget Walsh Scholarship, 205 Mountainview Road North, Georgetown ON, L7G 4T6, Tel: (416) 872-0873.

Welsh 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: frsims@nortelnetworks.com

Xerox Aboriginal Scholars Program Deadline: June 15
Terms of reference: Applicants must be a Canadian 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) 733-6810, 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 7
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) 451-5561. Web: www.zajacfoundation.com 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 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

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 their 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 judging committee 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: BBM Scholarship, c/o The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5S2. Web: www.cab-acr.ca Email: cab@cab-acr.ca

Canadian Engineering Memorial Foundation Undergraduate Engineering Scholarships Deadline: January 20

Simon Fraser University 2006 • 2007 Calendar

Canadian Engineering Memorial Foundation

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 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

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 their 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 judging committee 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: BBM Scholarship, c/o The Canadian Association of Broadcasters, PO Box 627, Station B, Ottawa ON, K1P 5S2. Web: www.cab-acr.ca Email: cab@cab-acr.ca

Canadian Engineering Memorial Foundation Undergraduate Engineering Scholarships

Deadline: January 20

Simon Fraser University 2006 • 2007 Calendar
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 leadership and involvement in extra-curricular 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.cheminst.ca

Canadian Engineering Memorial Foundation Claudiette 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 Claudiitte MacKay-Lassonde Scholarship Award, P.O. Box 370, Renfrew ON, K7V 4A6, Tel: 1-866-883-2363. Web: www.cheminst.ca

Canadian Science 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 about to enter the final year of studies at a Canadian university, and will be made for academic excellence and demonstrated contributions to the Canadian Society for Chemical Engineering, such as participation in student chapters. Applicants must be members of the Canadian Society for Chemical Engineering. The application should contain evidence of academic standing, letters of reference and evidence of contribution to the Society.

Contact: Canadian Society for Chemical Engineers, #550-130 Slater Street, Ottawa ON, K1P 6E2, Tel: (613) 232-6522, Fax: (613) 232-5862.

Web: www.cheminst.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 Spaceflight 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 pre- and postflight testing, analysis and report preparation phases of simulated spaceflight experiments and life sciences research. The CSA's Space Life Sciences Program will sponsor student(s) who have demonstrated scholastic excellence and a strong 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: slstp@space.gc.ca

CCPE – Manulife Financial National Scholarships Deadline: March 1

Terms of reference: Three CCPE- Manulife Financial Scholarships valued at $10,000 each to provide financial assistance to engineers returning to university for further study or research in an engineering field. Candidates must be accepted or registered in a faculty of engineering. To be eligible, candidates must be licensed to practice engineering and be registered as full members of one of the provincial/territorial professional association/order in their province/territory.

Contact: CCPE National Scholarship Program, Canadian Council of Professional Engineers, 1100-180 Elgin Street, Ottawa ON, K2P 3K3, Tel: (613) 232-2474, Fax: (613) 230-5759.

Web: www.ccpe.ca Email: awards@ccpe.ca

Electro-Federation Canada (EFC) Foundation Scholarship University Program Deadline: July 31

Terms of reference: Scholarships are available to Engineering Science, Computer Science and Business Administration students who have completed their first year of study and have maintained a minimum 70% average 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 Canadian 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 cumulative 85% 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 Broadway Crescent, Victoria, BC V8N 1N3. Email: mgalbraith@pinc.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 attained a first class standing as defined by the nominating institution. Applications are by nomination only.

Web: www.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 Canadian 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 cumulative 85% 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 Broadway Crescent, Victoria, BC V8N 1N3. Email: mgalbraith@pinc.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 attained 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. Metcalf 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), telecommunications, 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 Squares Foundation Scholarship Deadline: unknown

Terms of reference: The Squares 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 semesters, proof of registration in applicable courses for this year and two personal references. Apply on website (www.itisb.com).

Contact: Square 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 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 the 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 is looking 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 5Z2. 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, Rick Chace Foundation Scholarship and Colin 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) 463-1506 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 finance, dance, music, film and video, creative writing, arts administration, museology and conservation studies, or visual arts programs.

Contact: Coordinator, Scholarship Awards Program, BC Arts Council, 800 Johnson Street, 5th floor, PO Box 9819, Stn Prov Govt, Victoria BC, V8W 9S3, Tel: (250) 356-1724, Fax: (250) 387-4099. Web: www.bcartscouncil.ca Email: bcartscouncil@gov.bc.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, and enrolled 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 include 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, or business administration (with a specific focus on government or non-profit management). The candidate must belong to one of the following groups: Black, Latin, Eskimo or Aleut, Asian or Pacific Islander, Hispanic. Must be a citizen or permanent resident of the US or Canada. Recommendation from 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 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: cius@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 of their choice, 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, BC V8Z 1J4 Web: www.bchistory.ca

Roberta 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.woodlandcentre.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 worker in the professional field.

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 1

Terms of reference: The purpose of the scholarships 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 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 examples.

Contact: The Community Arts Council of Richmond, #180-7700 Minoura Gate, Richmond BC, V6Y 1R9, Tel:
External Scholarships for Business Administration Students

Elen Bell YMCA Memorial Scholarship
Deadline: February 15
Terms of reference: Awarded to a student pursuing a career in marketing and advertising. Ellen Bell will be remembered for her 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 3Z3, Tel: (604) 681-9622, Fax: (604) 688-0220.
Web: www.ymvma.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 enrolls 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 5L4, 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 enrolls 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 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 5L4, 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 enrolls in the Certified Management Accountants of 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) 687-5887, Fax: (604) 687-6688, Toll-Free: 1-800-663-9646 Web: www.cmabc.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. Eligible applicants must 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 Camre, 4757 Tebo Avenue, Port Alberni, BC, V9Y 8A9, Tel: (250) 724-1241, Fax: (250) 724-1028, Toll Free: 1-877-724-1241.
Web: www.cfcdac.ca Email: info@cfcdac.ca

Government Finance Officers Association – Minority 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 US 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

Government Finance Officers Association – Frank L. Greathouse Government Accounting Scholarship
Deadline: February 3
Terms of reference: This scholarship competition is for secondary students enrolled in a recognized advertising and/or marketing program at a Canadian university or community college. The Frank L. Greathouse Scholarship is named in honor of Frank Greathouse, the principal instrument of advertising self-regulation. The Canadian Code of Advertising Standards (Standards Canada)

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 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 AIESEC. 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 – North West 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, Winipeg 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 (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

Robert E. Oliver Scholarship (Advertising Standards Canada)
Deadline: February 1
Terms of reference: ASC is pleased to award one $1,500 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 1H5, Tel: (416) 961-8311, Fax: (416) 961-7904, Web: www.adstandards.com

External Scholarships for Education Students

Central Okanagan Teachers Association – A.S. Matheson Education Scholarship
Deadline: September 1
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.theocta.ca Email: info@theocta.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’ 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 St., Suite 205, Edmonton AB, T6G 2E8. 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 $1000, 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 205 733 Johnson Street, Victoria BC, V8W 3C7, Tel: (250) 383-3306, Fax: (250) 383-2400.
Web: www.apbbc.ca Email: apbbc@apbbc.bc.ca

Dow/CCWEST − Women in Chemistry and 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.ccwest.ca Email: info@ccwest.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 $1000 as a mark of excellence for achievement in organic chemistry or biochemistry by undergraduate students completing their first 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: cinst@cheminst.ca

Canadian Space Agency Spaceflight and Life Sciences Training Program Scholarship
Deadline: January 31

Terms of reference: The Canadian Space Agency Spaceflight 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 postflight testing, data analysis and report preparation phases of simulated spaceflight 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 Centre, Richmond BC, V6Y 4A4, Tel: (604) 278-2688, Fax: (604) 278-3440.
Web: www.space.gc.ca/slstp Email: slstp@space.gc.ca

Robert Canton Scholarship
Deadline: September 30

Terms of reference: The scholarship is intended to support students in higher highs 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 V6G 2H9.
Web: http://www.summit.org/bc.ca/aer/aerquality/carla/cfatn_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. Scholarship 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 the 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, 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 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, 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

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 who 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 application form, a personal statement (type, not to exceed 500 words) outlining your interest 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.
Health prior to the creation of the Ministry for the Children and Families, for at least 12 months in the last four years, dating back from the start of bursary period; and
- you are enrolling in a nursing refresher program or qualifying program that will lead to licensure as an RN, RPN or LPN; OR you are enrolling in the third or fourth year of a nursing program or are enrolled in graduate or specialty nursing.

Contact: Nursing Education Bursary Program, 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), Fax: (250) 356-5440, Wv: bcsap.bc.ca

BC Paraplegic Foundation Scholarships/Bursaries
Deadline: May 31
Terms of reference: Each year the BC Paraplegic Foundation gives out a number of scholarships and bursaries to needy students with disabilities attending post secondary institutions in British Columbia. The awards are available to members of the BC Paraplegic 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. The monies for individual awards vary from year to year, dependent upon interest from investments. Therefore, the values of the scholarships and bursaries may vary from year to year according to the availability of funds. Completion of an application form will ensure the applicant is considered for each scholarship or bursary they are eligible for.

Contact: Scholarship and Bursary Awards Committee, c/o BC Paraplegic Association, 780 S.W. Marine Drive, Vancouver BC, V6P 5Y7, Tel: (604) 324-3611, Fax: (604) 326-1229.
Web: www.bcpora.org

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-graduate study 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, who are enrolled 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.shtml

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 applicants 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 S7N 5B8, Tel: (306) 966-8509, Fax: (306) 966-8517.
Web: COOP-STUDIES.USASK.CA
Email: COOPSTUDIES@USASK.CA

Ulltán 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 and submitted to 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.

Contact: Pipeline Contractors Association of Canada, Suite 201, 1075 North Service Road W., Oakville ON, L6M 2G2, Tel: (905) 847-9383, Fax: (905) 847-7824.
Web: www.pipelined.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 register 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 2J6. Tel: (604) 836-2050.

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.cfuwpp.ca

Hugh Christie Memorial Bursary – YMCA
Deadline: November 1
Terms of reference: A $500 bursary is available to a student who is pursuing a career in Corrective 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, Recreation, 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.
First Citizen’s Fund Student Bursary Program

Deadline: May 27

Terms of reference: Applicants must be persons of North American aboriginal ancestry and have been residents in BC for 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 considering 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 up to attain a master’s degree on 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.bcafc.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) 356-7134.
Web: www.forestrenalbc.ca

Hamilton Community Foundation

Deadline: October 1, February 1 & June 1

Terms of reference: Hamilton Community Foundation provides modest financial assistance from various bursary funds established by generous citizens to post-secondary education. 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 2Z3. Tel: (604) 913-2081, Fax: (604) 913-0333.
Web: www.fnchc.ca Email: djohnson@fnchc.ca

Insurance Institute of BC Bursary

Deadline: June 15

Terms of reference: Valued 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.


KIN Canada Bursaries - A Program of the Hal R Fogers 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 register as 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 1180, CAMBRIDGE, ON, N3H 5C6. Tel: 1-800-742-5546 ext. 215, Fax: (519) 650-1091.
Web: www.kincubs.ca Email: kinhq@kincubs.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. An applicant 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 Peoples Program, Department of Justice Canada, Programs Branch, 284 Wellington Street, EMB - 6th floor, Ottawa ON K1A OH8, 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: Silvio Sauro, Honourary Secretary, The Leonard Foundation, 20 Englington Avenue West,
National Aboriginal Achievement Foundation Business, Science and General Education

Deadline: June 1

Terms of reference: The NAAF provides support for Aboriginal students studying in the fields of business, science, law, engineering, information technology, technical studies, education, social work and the social sciences. Applicants must enroll in post-secondary programs of at least two academic years at recognized Canadian technical institutes, CEGEPs, colleges and university. Certificate or diploma programs, undergraduate and graduate degree programs are eligible for consideration. Awards are made on the basis of financial need, academic merit, and the applicant's interest and commitment to his or her education.

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.naaf.ca Email: education@naaf.ca

Piolat Foundation Fine Arts Bursary

Deadline: September 30

Terms of reference: The Piolat 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 present or proposed studies and some indication of previous artistic achievements, with two letters of reference from persons able to attest to the candidate's artistic merit and copies of relevant documents such as transcripts of marks or certificates awarded.

Contact: M. Walter Herring, Secrétaire des Bourses, La Fondation Andre Piolat, 1575 Avenue, Tieme ouest, Vancouver BC, V6J 1S1, Tel: (604) 263-5639.

The Pisapio 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 study. 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 Scholarship Trust, 421 Baker Street, Nelson BC, V1L 4H7.
Email: info@poulinagencies.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 either have a diagnosis of 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 of 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 certificates, two 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: District 11 Bursary, Quota International, 220 Manor Park Road, Penticton BC, V2A 2R2, Tel: (204) 728-2633, Fax: (204) 728-9610.
Web: www.quotacanada.org
Email: penticton@quotacanada.org

Rixon Rafter Bursary Fund
Deadline: September 30

Terms of reference: This fund was established in honor of the late Rixon Rafter, a graduate of the Ontario School for the Blind (now the W. Ross MacDonald School) in Brantford, Ontario. Mr. Rafter became a successful newspaper publisher. Interest from the fund provides assistance to needy, registered blind students involved in academic or educational pursuits. The Rixon Rafter Bursary Grants will provide financial aid to students with strong career aspirations. Grants will be made based on financial need and career goals.

Contact: Chairman, Rixon Rafter Bursary Committee, The W. Ross MacDonald School, Brantford ON, N3T 3J9.

Royal Canadian Legion British Columbia/Yukon Command Bursary Program
Deadline: May 31

Terms of reference: A number of awards are offered annually for students proceeding from high school to university and to students taking a full course-load in second and third year university. The awards are granted on the basis of academic standing, financial need and veteran affiliation. Incomplete and/or late applications will not be considered.

Contact: The Royal Canadian Legion, BC/Yukon Command, 3026 Arbuteus Street, Vancouver BC, V6K 3B2, Tel: (604) 736-8186, Fax: (604) 736-1635.
Web: www.pacificlegion.org
Email: admin@pacificlegion.org

Royal Canadian Legion British Columbia Ladies auxiliary Branch 160 Comox Bursary Program
Deadline: May 31

Terms of reference: Bursaries are offered annually to applicants who attend post secondary school, continuing or trade school. The awards are granted on the basis of academic standing, financial need and veteran affiliation. Incomplete and/or late applications will not be considered.

Contact: The Royal Canadian Legion Ladies’ Auxiliary Branch No. 160, 1825 Comox Avenue, Comox BC, V9M 3M3

R.B. Shaw Bursaries
Deadline: September 25

Terms of reference: Bursaries in the amount of $500 are available each year. Applicants must be offered 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 live in the East or West Kootenay regions.

Contact: The Pisapio Scholarship Trust, 421 Baker Street, Nelson BC, V1L 4H7.

Northern Residents Scholarships – Canadian Northern Studies Trust
Deadline: January 3

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 Stevenson Bursary Fund
Deadline: September 30

Terms of reference: The intent 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 provide financial support to ensure that students who were born and raised in northern Canada have the opportunity to pursue their post-secondary education.

Contact: Judge Brian Stevenson Bursary Committee, The W. Ross MacDonald School, Brantford ON, N3T 3J9.

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 three 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: liannesullivan@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 of the Surrey/White Rock area for the immediately preceding five years. Contact: Surrey White Rock Bursary Foundation, Box 75143, White Rock BC, V4B 5L8, Tel: (604) 5538-8210. Web: www.cfuw-ursurrey.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, degree or 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 3rd Avenue, Vancouver BC, V5T 1C8, Tel: (604) 872-0770, Fax: (604) 873-1758.
Web: www.theobc.org

University Women’s Club of the Comox Valley Bursary
Deadline: July 1

Terms of reference: A $500 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 APEGBC 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 in the third or fourth year of undergraduate studies as a full-time student in the Natural sciences at a university, academy, college or the University of Alaska. Applicants must also have been resident in the Northwest Territories for at least five years.
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Contact: Scientific Services, Aurora Research Institute, 191 MacKenzie Road, Box 1450, Inuvik, NT X0E OTO, 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 NAAF 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 Yorkville Avenue, Toronto ON, M5R 1B9, Tel: (416) 926-0775, Toll Free: 1-800-329-9780, Fax: (416) 926-7554. Web: www.naaf.ca Email: education@naaf.ca

External Bursaries for Science Students

Division of Engineers and Geoscientists for the Forest Sector Bursaries Deadline: May 15

Terms of reference: The Division of Engineers and Geoscientists in the Forest Sector (DEGISF) 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 OTO, 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 3

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 CEPEG 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” x 11” 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: 1-866-278-4736, (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 Studentship, 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 academic credit 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 they 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 a 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) 924-3388, Fax: (416)323-3338. Web: www.ams-inc.on.ca Email: grants@ams-inc.on.ca

BC Press Council Prize Deadline: May 28

Terms of reference: The British Columbia Press Council wants young British Columbians 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 the best essay 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 Broughton Street, Victoria BC, V8W 2A5, Tel: (250) 384-3344. Web: www.bcppresscouncil.org Email: council@bcpresscouncil.org

Book Promoters’ Association of Canada Bursary Deadline: May 15

Terms of reference: The Janice Janford Memorial Bursary will be awarded to a student whose primary interest is book marketing, promotion or publicity. The purpose of the bursary is to assist a student attending Simon Fraser University’s Book Publishing Workshop. Applicants must write a press release about their favourite book. Applications are accepted from both publishing program students and those already employed in the industry.

Contact: Stephanie Cunningham at publications@sfu.ca or phone 604-291-5241. Web: www.bmpcanada.org Email: pubworks@sfu.ca

Canada Council For the Arts Molson Prizes Deadline: December 1

Terms of reference: Prizes are awarded annually to two distinguished individuals (one in the arts, one in the social sciences and humanities). The prizes are intended to encourage continuing contribution to the cultural and intellectual heritage of Canada. Candidates must be Canadian citizens or permanent residents of Canada and must be nominated by three individuals or three organizations, or a combination thereof.
Contact: Director, Endowments and Prizes Unit, 1-800-263-5588, ext. 5041 or (613) 566-4414, ext. 5041, Fax: (613) 566-4407.
Web: www.canadacouncil.ca
Email: prizes.endowments@canadacouncil.ca

Canadian Blood Services Summer Internship Program
Deadline: February 2
Terms of reference: Canadian Blood Services (CBS) offers a Summer Internship Program to attract and support students at Canada’s post-secondary institutions to contribute to, and experience from, working on projects within any division of CBS. This program is offered to students from any field relevant to the business of CBS. Candidates are required to submit a completed application form (SIP-01) that is available at www.bloodservices.ca (click on “R&D”).
Contact: R&D, Canadian Blood Services, 1800 Alta Vista Drive, Ottawa ON, K1G 4J6, Tel: 613-739-2408, Fax: 613-731-2201. Web: www.bloodservices.ca

Canadian Bureau for International Education International Learning Grants
Deadline: December 1
Terms of reference: International Learning Grants are offered to students to allow them to balance the additional costs associated with international learning. Canadian citizens and permanent residents enrolled full-time at a CBIE member institution are eligible to apply. Applicants must be accepted in an exchange program organized by their college, university or secondary school board. Selection is based on the innovativeness of the program, relevance to your future international education career and potential to contribute to global understanding, as well as need, merit and personal suitability. Programs may be study, study-internships or internships. Research only programs are not eligible.
Contact: Canadian Bureau for International Education, 220 Laurier Ave. West, Suite 1100, Ottawa ON, K1P 5Z9, Tel: (613) 237-4820, Fax: (613) 237-1073. Web: www.cbie.ca

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 semester. 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, 1-800-378-2233, 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 registered in Canadian Universities, based on quality of summary, originality and pertinence of the research and student’s motivation to participate. Two winners will be selected to participate at the Montreal Congress.

Contact: Mr. Yves Gratton, Director, Technical Program and Study Tours Committee, CIGB-ICOLD Montreal 2007, 1500 West René-Levesque Boulevard, 10th floor, Montreal QC, H2Z 1A4, Tel: (514) 289-4522, Fax: (514) 289-4599. Email: gratton.yves@hydro.qc.ca

Canadian Federation of University Women Parksville/Qualicum – Grace D’Arcey 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

Canadian Federation of University Women Parksville/Qualicum 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

Canadian-Scandinavian Foundation Shorter Study Grant
Deadline: January 31
Terms of reference: The CSF Special purpose grants are small travel grants in the range of $500 to $800 dollars set up in order to help defray travel costs in connection with shorter research/study visits to Scandinavia.
Contact: Jan O. Lundgren, CSF Secretary, c/o Geography Department, McGill University, 805 Sherbrooke Street W., Montreal QC, H3A 2K6, Tel: (514) 398-4111, Fax: (514) 398-7437. Web: www.canada-scandinavia.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. The applicant must submit his or her outline in any medium. The submission must contain a brief background of the applicant, including current employment, if any; an outline of the subject of the research; the significance of this choice; and a description of how the research will be undertaken. Each submission should be accompanied by a letter of support from a person selected by the applicant.
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 O46
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: Ukrainian Resource and Development Centre (URDC), Grant MacEwan Community College, Box 1796, Edmonton AB, T5J 2P2, Tel: (403) 497-4374, Fax: (403) 497-4368.
Web: www.gmrcc.ab.ca/uni/urdc/scholars.htm

Sheldon Chumir Internship in Ethics in Leadership
Deadline: March 14
Terms of reference: Applications are invited from second-year students or graduate students 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 and 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 870, 130 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 North, NY10022, (Tel): (212) 758-3233, Fax: (212) 755-5780.
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 200/238 131 Bloor Street West, Toronto ON, MSS1R8, 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

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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 is open 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.judeofed.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) 823-1381.

Web: www.worklifecanada.ca
Email: lhawkin@uoguelph.ca

The Foundation for the Advancement of Aboriginal Youth
Deadline: October 1
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 (non-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) 961-0663, Fax: (416) 961-3995, Toll Free: (800) 465-7078.
Web: www.ccbav.com Email: faavyinfo@ccbam.com

The Canadian-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 do research relating to the study of Canada and the United States 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: economics, 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. FULLBRIGHT 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. FULLBRIGHT 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. FULL-BRIGHT-OAS 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.

Contact: Foundation for Educational Exchange Between Canada and the United States of America, 350 Albert Street, Suite 2015, Ottawa, ON K1A 1R4, Tel: (613) 688-5540, Fax: (613) 237-2029.
Web: www.fulbright.ca 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.gssoa.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 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 school graduate, have interest in, and 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 Greenstreet 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. Awards 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 Sherbrooke Street West, Suite #1, Montreal QC, H3H 1E4, Tel: (514) 937-9225, Fax: (514) 937-0141.
Email: egreen@total.net, greenshields@belnet.ca

Gulf and Fraser Credit Union – Robert F. Long Educational Award
Deadline: September 1
Terms of reference: The applicant must be a member, or the child of a member, of Gulf & Fraser Credit Union, and that the successful applicant be enrolled at a University or Technical Institute. An official transcript of your most recent marks must be submitted.

Contact: Gulf and Fraser Financial, 803 East Hastings Street, Vancouver BC, V6A 1R8, Tel: (604) 254-9811, Fax: (604) 254-0215.
Web: www.gffg.com Email: inquiry@gffg.com

Heroes of Our Time Award
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) 241-5808.
Web: www.afn.ca

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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, Simon Fraser University 2006 • 2007 Calendar
410-2075 Yonge Street, Suite 213, Toronto ON, M5S 1R1, Tel: (613) 566-4407, 1-800-263-5588, ext. 4231, or (613) 556-4308, Fax: (613) 566-4407. Web: www.canadacouncil.ca Email: kilam@canadacouncil.ca

Husky Oil Education 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) 570-3940. 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 either the student’s or college’s entrance requirements, have 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 student 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, forestry 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, V5T 1H2, Tel: (604) 873-3761, Fax: (604) 873-9152.
Web: www.aicn-inac.gc.ca

Inter-American Development Bank Internship Program
Deadline: January 31
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 (CUADHHHP). The terms of the project work will be established as mutually beneficial for both the recipient and CUADHHHP.
Contact: Alice Chumera, Administrative Assistant, Ukrainian Resource and Development Centre, 7-156, 10700-104 Avenue, Edmonton, AB T5J 4E2, Tel: (780) 497-4374, Fax: (780) 497-4377
Web: www.macewan.ca Email: chumera@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 provided 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.ucf.ie Email: jkelly@ucd.ie

Japan Foundation
Deadline: unknown
Terms of reference: The Japan Foundation (Kokusai Koryu 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 detailed 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@jfjto.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.
Web: www.canemb-japan.go.jp Email: culturalcentre@consuljpvan.com

The Killiam Program of the Canada Council For The Arts
Deadline: May 16
Terms of reference: The Killiam 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, Killiam Program, The Canada Council for the Arts, 350 Albert Street, P.O. Box 1047, Ottawa ON, K1R 5V8, Tel: 1-800-263-5580, ext. 4231, or (613) 556-4308, Fax: (613) 566-4407.
Web: www.canadacouncil.ca Email: kiliam@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 member, of AUCU.
Contact: Canadian Awards Program, Association of Universities and Colleges of Canada (AUCU), 350 Albert St., Suite 600, Ottawa ON, K1R 1B1, Tel: (613) 563-1236, Fax: (613) 563-9745.
Web: www.aucu.ca Email: awards@aucu.ca

Kobzár Literary Award – Ukrainian Canadian Foundation of Taras 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 Kobzár Literary Award, Ukrainian Canadian Foundation of Taras Shevchenko, 456 Main Street, Winnipeg, MB, R3B 1B6, 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 9
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 St:lo people. Financial need is considered. Applications must include a transcript of grades or a letter from someone from your school stating your grades, a letter of recommendation and a letter explaining your goals and expectations.
Contact: st:lo Stelith Advisory Committee, Coqualeetza Centre, Box 370, Sardis BC, V2R 1A7, Tel: (604) 858-9431, Fax: (604) 858-8488.

Kodak Fellowship in Film Preservation – Association of Moving Image Archivists
Deadline: May 8
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. He applicant must be enrolled 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.
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
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) who demonstrates outstanding feminist work in media and or activism.
Contact: Canadian Women’s Foundation, 133 Richmond Street West, Suite 504, Toronto ON, M5H 2L3, 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 semester-long work assignment of international praxis 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 developing countries, 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 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) 927-3006, 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 awards committee at the address below, outlining the work study program you would like to pursue.
Contact: Awards Committee, UBC Museum of Anthropology, 6393 NW Marine Drive, Vancouver BC, V6T 122, Tel: (604) 822-5567, Fax: (604) 822-2974.
Web: www.moa.ubc.ca

The Military and Hospitaller Order of Saint Lazarus of Jerusalem Grand Priority in Canada
Deadline: March 15
Terms of reference: The Military and Hospitaller 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 Hospitaller Order of St. Lazarus of Jerusalem Grand Priority in Canada, 1435 Coledale Place, Suite 100, Ottawa ON K1G 3H3, Tel: (613) 746-5280, Fax: (613) 746-3982.
Web: www.stlazarus.ca
Email: chancery@stlazarus.ca

Minerva Foundation For B.C. Women Education Award
Deadline: June 2
Terms of reference: The purpose of the fund is to provide an annual award a woman at Simon Fraser University. The award will be granted on the basis of financial need and academic proficiency, with preference given to a single mother pursuing graduate studies. Apply to Minerva Foundation.
Contact: Minerva Foundation for BC Women, Suite 1730, 700 West Georgia Street, PO Box 10036, Vancouver BC, V7Y 1A1, Tel: (604) 683-7655, Fax: (604) 683-7655.
Web: www.theminervafoundation.com
Email: minerva@telus.net

National Association of Women and the Law Charitable Trust for Research and Education Essay Competition
Deadline: May 31
Terms of reference: NAWL and the NAWL Trust invite students to submit essays on any topic related to feminist legal studies. The text should incorporate feminist research and analysis. The competition is open to all students at recognized post-secondary institutions in Canada.
Contact: 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: February 1
Terms of reference: The Department of National Defence offers a number of awards in studies relating to current and future 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.

a) MA Scholarship Program,

b) PhD Scholarship Program (including Dr. Ronald Baker Doctoral Scholarship),

c) Internship Program,

d) Post-Doctoral Fellowship Program (including R.B. Byers Fellowship).

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: awanmitee@aucc.ca

National Essay Competition
Deadline: April 5
Terms of reference: The competition, open to full time undergraduate students enrolled in a non-professional faculty of a Canadian University or CEGEP, offers prizes to the top three submission. A 1500 word essay, topic TBA, must be submitted by email. For information about entry procedures, regulations and essay topic, please visit website.
Web: www.rotman.utoronto.ca/essaycompetition Email: essaycompetition@rotman.utoronto.ca

Northern Scientific Training Program (NSTP)
Deadline: December 1
Terms of reference: The program supports scientific training provided by Canadian universities which gives advanced students professional 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.sinc-niac.gc.ca/nstp
Email: nstp@sinc-niac.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 a 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) 996-2589. Web: www.nserc.ca

Okanagan Historical Society Student Essay Contest
Deadline: March 15
Terms of reference: The purpose of the essay contest is to encourage the research writing of Okanagan history by post secondary students. All post secondary students enrolled in British Columbia colleges and universities are eligible to submit essays on any historical topic about the Okanagan, Shuswap or Similkameen Valleys to the Okanagan Historical Society. The essay is to be 1500 to 2500 words. The prize is $1000 and possible publication in the annual “Okanagan History” book.
Contact: Jessie Ann Gamble, Box 516, Armstrong BC, V0E 1B0, Tel: (250) 546-9416.
Web: www.okanaganhistoricalsociety.org
Email: jgamble@junction.net

Lewis Perinbam Award in International Development: Recognizing the Accomplishments of Ordinary Canadians (CBIE)
Deadline: September 24

Simon Fraser University 2006 • 2007 Calendar
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 contributions 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 area. 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: (416) 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 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, 6393 NW Marine Drive, Vancouver BC, V6T 2Z2; Tel: (604) 822-5567, Fax: (604) 822-2974.

Web: www.moa.ubc.ca Email: info@moa.ubc.ca

Royal Bank Native Student Awards Program

Deadline: January 31

Terms of reference: The Royal Bank Native Student Awards Program was launched in 1992 to assist Aboriginal students in receive 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 (graduate or undergraduate) load 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 2S5; Tel: (416) 955-5824, Fax: (416) 955-5840. Web: www.rbc.com Email: aboriginalstudentswards@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, 1401 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 or 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) 873-4255, 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
• Language Teaching IG Grants
• Seed Grants for India Studies
• Faculty Fellowships
• Librarian Fellowships
• Post-Doctoral Fellowships
• Arts Fellowships
• Student Fellowships

Contact: Program Officer, Development Studies Program, Shastri Indo-Canadian Institute, 1402 Education Tower, 2500 University Drive NW, Calgary AB, T2N 1N4, Tel: (403) 220-7467, Fax: (403) 289-0100. Web: www.sici.org Email: sici@ualg.ca

The Sesim 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 to the award, dealing with a forestry or forest-environment topic of public interest, e.g. forest ecology, silviculture, wildlife management and 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 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.macewan.ca

Transamerica Life Canada Conductive Education Award

Terms of reference: This 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 of the Canadian Association of Former Parliamentarians (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, will 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: exparl@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 for 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 AWARD The award aims to promote participation in and contribution of Canadians to society. Contact: Volunteer Recognition Awards, Volunteer Vancouver, #301-3102 Main Street, Vancouver BC, V5T 3Q7, Tel: 604-875-9144, Fax: 604-875-0710. Web: www.volunteervancouver.ca Email: vohvan@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); a woman; or a person with a disability (as defined by the pending Canada Employment Equity Act); or 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 is pleased to announce the 2006 Elie Wiesel Essay Contest, an international essay contest intended to challenge junior and senior students in colleges and universities to focus on ethical questions and subjects 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, NY10001, USA, Tel: (212) 490-7777, Fax: (212) 490-6006. Web: www.iewieselpize.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/technical 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, 1568 East 2nd Ave, Vancouver BC, V5N 1C7, Tel: (604) 267-1756. Web: www.soroptimist.org

**Soroptimist International of the Tri-Cities, 4) be motivated to achieve their educational and career goals.**

Terms of reference: The Women's Opportunity Award (Soroptimist International of Burnaby-New Westminster, Tel: (604) 435-4280; or Soroptimist of the Tri-Cities, Tel: (604) 936-9572; Ms Eva Maclntyre, 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)980-3192.

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 Ph.D. 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 enroll in a Canadian university. Candidates 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: 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: Individual 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 Prize. Each member of the team receives a certificate and a two-year membership in the Canadian Institute of Chemical Engineers.

Contact: Canadian Society for Chemical Engineering, #550-130 Slater Street, Ottawa ON, K1P 6E2, Tel: (613) 232-6252, Fax: (613) 232-5862. Web: www.chemist.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 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 valued at $750 to a third or fourth year MSC student who has a major 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) 996-2589. Web: www.nserc.ca Email: schol@nserc.ca

**Society of Automotive Engineers Awards**

**Deadline:** April 1

Terms of reference: The Society of Automotive Engineers is offering several awards to students in engineering; the SAE Doctoral Scholars Forgivable Loan Program, the Yanmar/SAE Scholarship and the SAE Long Term Member Sponsored Scholarship. Eligible applicants will be entering their senior year of undergraduate engineering or enrolled in a postgraduate engineering or related science program. Applicants must be pursuing a course of study or research related to the conservation of energy in transportation, agriculture & construction, and power generation, with emphasis on internal combustion engine. Web: www.sae.org

**External Awards for Arts and Social Sciences Students**

**Canadian Association of Geographer’s Undergraduate Award**

**Deadline:** Spring

Terms of reference: The Canadian Association of Geographers will award in spring semester, a prize to the outstanding student in geography.

Contact: Contact: Society of Automotive Engineers, SAE Education Relations, 400 Commonwealth Drive, Warrendale, PA 19095-0001, Tel: 1-724-772-4047. Web: www.sae.org Email: sae@sae.org

**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 Memorial Fund Society, offers two prizes ($600 and $200) to students majoring in history or political science and international relations. Each college/university 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 to Churchill, but is not essential.

Contact: The Churchill Society of BC, c/o P.O. Box 93041, West Vancouver, BC V7V 3G4. Tel: (604) 290-0880, Fax: (604) 922-2002. Web: www.winstonchurchillbc.org
Sergei Eremenko Music Award (URDC)

Deadline: November 30

Terms of reference: This scholarship is available annually to any qualified applicant (individual or group), who is planning to pursue 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.macewan.ca

HKB-Savings Bank Prize

Deadline: June 30

Terms of reference: HKB 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 HKB Savings Bank. The study has to be written in one of the following languages: English, French, German or Dutch.

Contact: HKB-Banque d’Epargne, Lange Lozanastraat 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 accepted. Open to Grant 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.macewan.ca

Anna Pidruchney Award for New Writers (URDC)

Deadline: November 30

Terms of reference: Awarded annually to a novice writer for a literary work which includes Ukrainian Canadian characters or is based on a Ukrainian Canadian theme. Only completed works will be considered. All genres of writing (including novels, short stories, poems, essays, and dramatic works) are acceptable. Open to Grant MacEwan Community College students and other authors. Preference will be given to young writers who have not yet had their works published on a regular basis, and who are considering writing as a profession. The award will be granted for English-language and Ukrainian-language submissions in alternating years.

Contact: Anna Pidruchney Award for New Writers, c/o Ukrainian Resource & 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

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 4R8, 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 excellence 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 is not limited to, projects that work towards export oriented companies or development of concepts and ideas that have benefited BC’s export community. EDC will present the winner with a $3,000 scholarship for continuing his/her studies.

Contact: Financial Assistance, Simon Fraser University.

HKB-Savings Bank Prize

Deadline: June 30

Terms of reference: HKB 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 HKB Savings Bank. The study has to be written in one of the following languages: English, French, German or Dutch.

Contact: HKB-Banque d’Epargne, Lange Lozanastraat 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: 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,
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 Assistance**
The purpose of the Canada Student Loan/BC Student Assistance 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 Assistance.

In August 2004, the BC government established a new loan reduction program to help high-need students manage the costs of post-secondary education. The Loan Reduction Grants will be paid at the end of the school year. The BC Loan Reduction Program was put in place in partnership with the Canada Millennium Scholarship Foundation. The program is available to students enrolled in post-secondary education programs that are two academic years or longer. Student Assistance, the student will receive with their notice of award from the Student Services Branch in Victoria.

If the student is also eligible for BC Student Assistance, the student will receive with their notice of award from the Student Services Branch in Victoria.

Some students with dependent children may qualify for Canada Study Grant funding. A detailed booklet describing the program is available at Financial Assistance or www.bcsap.bc.ca.

**Eligibility**
Applicants must be Canadian citizens or permanent residents (landed immigrants) to be eligible. Assistance will be provided to eligible registered full time 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.

**Loan Amounts**
In 2005/2006 Canada Student Loans Program (CSLP) increased the weekly loan limits on the federal portion of a student's loan from $165/week to $210/week. Single full-time students are eligible for a maximum of $5,440 in CSLP each semester. The maximum for student with dependent children is $8,670. You can apply for BCSAP for either one semester or two semesters at once (e.g. fall only, spring only, fall and spring).

**How to Apply**
A student in need of a Canada Student Loan/BC Student Assistance must first apply on-line at www.bcsap.bc.ca. Alternately, paper application packages are available from any post-secondary institution or from Financial Assistance. The application must be completed carefully and accurately by the student, and where applicable, by the spouse or parent(s). If the student's application is approved, the student will receive the mail a notification of award from the Student Services Branch in Victoria.

After receiving the notification of award from the Student Services Branch in Victoria, the Canada Student Loan document will be mailed to the student from the Student Services Branch and the student will then take the loan document to a designated Postal outlet for submission to the National Student Loan Service Centre for negotiation. If the student is also eligible for BC Student Assistance, the student will receive with their notice of assessment a B.C. Loan Agreement from the Student Services Branch in Victoria. The student will then take the loan agreement to a designated postal outlet for submission to the BC Student Loan Service Bureau for processing. Once the Service Bureau processes the loan agreement, the Student Services Branch in Victoria will request confirmation of the student's enrollment by the school and the funds for which the student is eligible will be electronically disbursed to the student's personal bank account according to financial information provided on the B.C. Loan Agreement. Students are advised to keep in constant touch with the bank, or service providers from which they secure their loans.

Interest on the loan is paid by the federal or provincial government as long as the student is registered as a full time student and the appropriate agencies are aware of their full time status. Students should contact their lending institution (bank, credit union, service provider) for information regarding the current interest rate and repayment schedule for Student Loans. Students who have previously received Canada Student Loans or BC Student Loans, but who do not negotiate their agreements for their immediate period of study, should submit a Schedule 2 and/or Certificate 2 to their lending institution in order to retain payment free status. Students must be undertaking a minimum of nine regular credit hours (six for students with permanent disabilities) in the current semester, be a...
Grants for Female Doctoral Students
A federal grant program is available to female doctoral students in specific doctoral programs. Please call 604.291.4356 for further information, or see www.bcsap.bc.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, Student Services Branch, Ministry of Advanced Education or visit the Student Services Branch website at www.bcsap.bc.ca (debt management tools).

Ministry of Advanced Education
Mailing address: PO Box 9173 Stn Prov Govt, Victoria, BC, V8W 9H7.
In Victoria call 250.387.6100; in the Lower Mainland call 604.660.2610; in North America call toll-free 1.800.561.1918, TTY 250.952.6832, Fax 250.386.9455 or toll-free fax in North America 1.888.262.2112, www.bcsap.bc.ca

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 Assistance, MBC 3200. On-line applications are available for most provinces. Check the Financial Assistance website at http://students.sfu.ca/caa 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. If you do not receive the original eight page SAR, you will need to contact FAFSA to request one.
To apply for Stafford Loans, the student must submit the signed SAR to Financial Assistance, 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 Assistance 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. 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 Assistance (Student Services) come to MBC 3200 or call 604.291.4356. You may also e-mail us at fiassist@sfu.ca.

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William and Jane Saywell Bursary 53  
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Faculty of Applied Sciences

9861 Applied Sciences Building, 604.291.4724 Tel, 604.291.5802 Fax, http://fas.sfu.ca

New address effective November 2006
8000 level Technology and Science Complex II

Dean
B.S. Lewis BA (Hamilton), MA, PhD (Iowa)

Associate Deans
W.S. Parkhouse BPE (Alta), MPE, PhD (Br Col)
J.D. Jones BSc (Sus), PhD (Reading), PEng

Director, Diversity and Recruitment
H. Matsui MSc (LSE)

Advisors
Ms. M. Black MA (Royal Roads), 604.291.3254 Tel
Ms. L. McGregor BComm (McM), 604.291.5332 Tel

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, as well as 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 (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
Post Baccalaureate Diploma in Communication
Post Baccalaureate Diploma in Computing Science
Post Baccalaureate Diploma in Kinesiology

Residency Requirements
Simon Fraser University may award substantial transfer credit for course work completed elsewhere. These transfer credit hours reduce the amount of work that needs to be completed at Simon Fraser University for a 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 one half of the total credit hours in the program must be earned through study at Simon Fraser University.
• At least two thirds of the total upper division credit hours in the program must be earned through study at Simon Fraser University.
• 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 programs and certificate programs offered through the Faculty of Applied Sciences. The conditions also apply to the Faculty of Applied Sciences major, honors, minor, extended minor program and specialist programs that form part of an overall degree program, whether the degree program is offered by the Faculty of Applied Sciences or by any other faculty.

School of Communication
K9671 Shrum Science Centre, 604.291.3687 Tel, 604.291.4024 Fax, www.sfu.ca/communication

Director
M. Laba BA (York, Can), MA, PhD (Nyl)

Professors
R.S. Anderson BA (Br Col), MA, PhD (Chic)
E. Balka BA (Wash), MA, PhD (S Fraser)
A.C.M. Beale BA, MA, PhD (McG)
A.L. Feenberg, BA (Johns H), MA, PhD (Calif),
Canada Research Chair
R.S. Gruneau BA (Guelph), MA (Calg), PhD (Mass)
R.A. Hackett BA (S Fraser), MA, PhD (Qu)
L.M. Harasim BA, MA (Alta), PhD (Tor)
S. Kline BA (Tor), PhD (Lond)
B.S. Lewis BA (Hamilton), MA, PhD (Iowa), Dean of
Applied Sciences
R.M. Lorimer BA, MA (Manit), PhD (Tor)
W.D. Richards, Jr. BA (Mich State), MA, PhD (Stan)
B.D. Truax BSc (Qu), MMus (Br Col)*

Associate Professors
P.S. Anderson BGS, MA (S Fraser)
P.M. Howard BA, MA (Regina), PhD (S Fraser)
M. Laba BA (York, Can), MA, PhD (Nyl)
C.A. Murray BA, MA (Wat), PhD (Qu)
R.K. Smith BA (Car), MA, PhD (S Fraser)
Y. Zhao BA (Beijing Broadcasting Institute), MA, PhD
(S Fraser), Canada Research Chair

Assistant Professors
Z. Druck BA (C'dia), MA, PhD (York, Can)
S. Gunster BA (Vic, BC), MA, PhD (York, Can)
K. McCullister BA, MA, PhD (S Fraser), PhD (Car)
G. McCarron BA (S Fraser), MA, PhD (York, Can)

Lab Instructor
D.C. Murphy BA, MA, PhD (S Fraser)

Adjunct Professors
S. Braham BSc (Lond), PhD (Penn State)
N. Duxbury BA (St Mary’s, Can), MPub
PhD (S Fraser)
J.A.D. Holbrook BSc (Dal), BASc (OTT), MSc (WOnt)
M.S. Lipsett BSc (Alta), SM (MIT), PhD (Lond)
S.G. Sigurdson BA (Manit), LLB (York, Can)

Senior Lecturer
D. Gutstein BA, MArch (Br Col)

Lecturers
C. Bodnar BA (OTT), MA (Can)

Advisors
Ms. L. Menkveld, K9673 Shrum Science Centre, 604.291.3520, menkveld@sfu.ca
Dr. G. McCarron, K9668 Shrum Science Centre, 604.291.3860, gmcarron@sfu.ca
Ms. M. Shimizu, K9669 Shrum Science Centre, 604.291.3862, mshimizu@sfu.ca

Ms. E. Wah, K9661 Shrum Science Centre, 604.291.5542 Tel, ewah@sfu.ca

*joint appointment with contemporary arts
Faculty members are also available for student 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 information in all its diverse forms is created, coded, communicated, and controlled. This approach provides students with wide opportunities to explore both communication theory and communication practice, as well as 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, its current problems and its potential for change.

See “School of Communication” on page 264 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 for students in other degree 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
Admission to the school is highly competitive. Entry Requirements information.

First Residency Requirements” on page 108. Offered by the School of Communication. See requirements apply to all programs offered or jointly division courses necessary to complete the program. Exceptions may be made by instructors in consultation with the director of the school. With approval of the Dean of Applied Sciences Office, the school will establish a yearly quota — the number of students that can be accommodated in the major/honors, joint major or minor programs. This quota will be established on the basis of projected available course space and school resources. The school admits a limited number each semester, consistent with the overall quota, on the basis of a minimum CGPA announced two semesters before the fall semester. The school will determine this annual minimum entry requirement on the basis of the places available. Every applicant for a major, minor or joint major program whose CGPA is greater than, or equal to, the annually announced requirement will be admitted. Under normal circumstances, admission will not be granted to those with a CGPA which is less than the admission CGPA set by the school. These requirements apply equally to a transfer or second degree student.

Course Prerequisite Requirements Registration in any communication course normally requires that students obtain a C- grade (or better) in each prerequisite. A minimum 2.25 CGPA and approval as a communication major, minor or publishing minor is required for entry into most communication upper division courses.

Transfer Credit and Residency Requirements Transfer students are advised that residency requirements apply to all programs offered or jointly offered by the School of Communication. See “Residency Requirements” on page 108.

First 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 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 60% or better; college or university transfer CGPA of 3.00 (B; 75%) or better; 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 listed below for each concentration.

Media and Culture CMNS 220, 221, 223 or 235. Technology and Society CMNS 210 or 225 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, 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, KIN, REM), and

• 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 must 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 registration 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 semester. 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.
**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 studies on dialogue 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. The minor 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. The levels of analysis range from local to global. The dis-entanglement of conflict management is evident. The levels of analysis sustaining, and evaluating dialogue.

**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 19 upper division credit hours including:
- CMNS/DIAL 460-4

and choose one of the following paths.

**Path A**
Students choosing this path must complete 15 credit hours in the Undergraduate Semester in Dialogue as follows.
- DIAL 390-5 Undergraduate Semester: Dialogue
- DIAL 391-5 Undergraduate Semester: Seminar
- DIAL 392-5 Undergraduate Semester: Seminar

**Path B**
Students choosing this path complete 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 CMNS courses taken for credit towards the Dialogue minor may not be counted as part of the CMNS credit hours needed for an honors, joint major, major, extended minor or minor in communication, or for a minor in publishing.

**Publishing Minor Program**

**Entry Requirements**
Acceptance into the publishing 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**
Four of the following courses must be completed, each with a grade of C- or better. No more than two courses from each discipline can be counted.
- CMNS 110-3 Introduction to Communication Studies
- CMNS 130-3 Explorations in Mass Communication
- CMNS 220-3 Introduction to Communication Media
- CMNS 240-3 The Political Economy of Communication
- ECON 105-3 Principles of Macroeconomics
- LING 100-3 Communication and Language
- LING 110-3 The Wonder of Words
- LING 260-3 Language, Culture, and Society
- CMNS 210 or 253
- CMNS 220, 221, 223 or 235.

**Continuation Requirement**
Once approved for the publishing minor program, a student must maintain a minimum CGPA of 2.25 to remain in good standing.

**Upper Division Requirements**
Four courses must be chosen from the following:
- CMNS 371-4 The Structure of the Book Publishing Industry in Canada
- CMNS 372-4 The Publishing Process
- CMNS 375-4 Magazine Publishing
- CMNS 437-4 Media Democratization: From Critique to Transformation
- CMNS 472-4 Books, Markets and Readers
- CMNS 473-4 Publication Design and Print Production
- CMNS 474-4 The Business of Publishing
- CMNS 478-4 Publishing Project Group

**Note:** upper division CMNS courses taken for credit toward the publishing minor may not be counted as part of CMNS credit hours needed for an honors, joint major, major, extended minor or minor in communication.

**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
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 course choices listed below for each area of 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.

**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 191 for requirements.

**Joint Major in Communication and Canadian Studies**
See “Joint Major Programs” on page 134 for requirements.
Joint Major in Communication and Latin American Development Studies

See “Joint Major Programs” on page 168.

Joint Major in Communication and Sociology/Anthropology

See “Joint Major in Sociology or Anthropology and Communication” on page 180 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 BA 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 231.

School of Computing Science


Director

U. Glässer BSc, MSc, PhD, Habilitation (Paderborn)

Professors Emeriti

T.W. Calvert BSc(Eng) (Lond), MSEE (Wayne), PhD (Carnegie Tech), PEng
R. Harrop BA, MA, PhD (Camb)
T. Kameda BE, ME (Tokyo), PhD (Prin)
J.J. Weinak BS (Xavier), MS (Chic), DSc (Washington U)

Professors

M.S. Atkins BSc (Nott), MPhil (Warw), PhD (Br Col)
B.K. Bhattacharya MSc (Calc), MSc, PhD (McG)
F.W. Burton BSc, MA (Colorado), PhD (E Anglia)
R.D. Cameron BSc, PhD (Br Col)
V. Dahit MSc (Buenos Aires), PhD (Aix-Marseilles I), Dip d’Et App (Aix-Marseilles II)
J.P. Delgrande BSc, MSc, PhD (Tor)
B.V. Funt BSc, MSc, PhD (Br Col)
Q. Gu BS (Shandong), MS (Ibaraki), PhD (Tokoku)
A. Gupta BSc (McM), MSc, PhD (Tor)
R.F. Hadley BA (Virginia), MSc (S Fraser), PhD (Br Col)
P. Heil BSc (Prague), MSc (McM), PhD (Montr)
R. Krishnamurti B'Tech, M'Tech (IIT Madras), PhD (Penn)
Z.N. Li BSc (China UST), MSc, PhD (Wis)
A.L. Liesiestan BGs (Kansas), MS, PhD (Ill)
W.S. Luk BA (Lond), MSc, PhD (Wat), PhD (Alta)
J.G. Peters BM Math (Wat), MSc, PhD (Tor)
F. Popowich BSc (Alta), MSc (S Fraser), PhD (Edin)
T.C. Shermer BES (Jons H), MdSc (McG)
G. Tardos Diploma, PhD, MSc (Georgia IT)

Associate Professors

M.S. Drew BSc, MSc (Tor), PhD (Br Col)
M. Ester MSc (Dortmund), PhD (Swiss Inst Tech)
U. Glässer BSc, MSc, PhD, Habilitation (Paderborn)
L.J. Hafer BSEE, MS, PhD (Carnegie-Mellon)
W.S. Havens BSc, MSc (Virginia), PhD (Br Col)
S.C. Sahinalp BSc (Bilkent), PhD (Maryland), Canada Research Chair
O. Schulte BSc (Tor), MSc, PhD (Carnegie Mellon)*

Assistant Professors

P. Befrenbrink MSc, PhD (Paderborn)
A. Bulatov MSc (Ural State), PhD (Russian Academy of Science)
A.F. Ergun BSc (Bilkent), PhD (Cornell)
G. Hamanren BSc (Jordan), MSc, PhD (Chalmers)
M. Heeveda BSc, MSc (Mansoura), PhD (Purdue)
V. Kabanets BSc (Kiev), MSc, PhD, PhD (Tor)
A. Kirkpatrick BS (Penn State), MS (Mahraril Inst), PhD (Ore)
J.C. Liu BSc (Tsinghua), PhD (HKUST)
D. Miltchell BSc (Tor), MSc, PhD (Tor)
T. Möller BS (Humboldt), MS, PhD (Ohio State)
G. Mori BSc (Tor), PhD (Calif)
J. Pei BE, ME (Shanghai Jiao Tong), PhD (S Fraser)
A. Sarkar, BSc (Poona), PhD (Penn)
T. Smyth BSc, MSc, PhD (B.C)
E. Ternovska BSc (Moscow State), MSc (Russian Academy of Science), PhD (Tor)
R.T. Vaughan BA (Sus), PhD (Oxf)
D. Weiskopf BSc, MSc, PhD (Tübinen)
K. Wiese BMath, BSc, MSc (Saarlandes), PhD (Regina)
H. Zhang BSc, MSc, PhD (Mat), PhD (Tor)

Adjunct Professors

F.D. Frachia BSc (Regina), MS (Wat), PhD (Regina)
J.W. Han MS, PhD (Wis)
T. Lee BSc, MSc (Br Col), PhD (S Fraser)
J. Schaub BSc, MSc, PhD (Darmstadt)
J. Strotthoff BSc, MSc (S Fraser), PhD (McG, DCs (Wat)

Senior Lecturers

A.H. Dixon BSc, MSc, PhD (Br Col)
M.D. Evans BSc, MA (Dal), MSc (Dund), MSc (Birm)

Lecturers

G. Baker BSc (Qu), MSc (S Fraser)
B. Bart BSc, BMath (Wat), BEd (WOnt), MSc (S Fraser)
D. Cukierman BSc (Republica, Uruguay), MSc, PhD (S Fraser)
T. Donaldson, BSc (S Fraser), MMath, PhD (Wat)
J. Edgar BScs (Univ Coll, London), MSc (S Fraser)
H.S. Kanguha BSc (Tor), MSc (Br Col)
A. Lavergne BSc (S Fraser), MSc (Br Col)
S. Pearce BSc, MSc (Br Col), PhD (Ariz)
J. Regan BSc (Vic, BC), MSc, PhD (Cal Tech)

Associate Members

J. Borwein, Mathematics
P. Borwein, Mathematics
J.C. Dill, Engineering Science
M. Monagan, Mathematics
J. Pelletier, Linguistics and Philosophy
R.D. Russell, Mathematics

L. Stacho, Mathematics
J. Trajkovic, Engineering Science
M.R. Trummer, Mathematics

*joint appointment with philosophy

Advisors

For general advice, see www.cs.sfu.ca/undergrad/Advising/.

For Simon Fraser University Surrey program advice, see www.cs.sfu.ca/undergrad/Advising/.

To book your own advising appointment, see www.cs.sfu.ca/CC/adbook/calendar.cgi

For Co-operative Education advice, see www.sfu.ca/cscoop/

Ms. H. Chicoine, Co-operative Education

Co-ordinator, 9832 Applied Science Building, 604.291.3917 Tel, chicoine@sfu.ca

The School of Computing Science offers a general program leading to a BSc or BA degree with major or honors in computing science, and specialist programs leading to a BSc degree with a major in computing science. It also contributes to a wide variety of programs that combine studies in computing science with studies in other academic disciplines. Formal joint programs include the joint major in information systems in business administration and computing science, the joint major in molecular biology and biochemistry and computing science, the joint major in computing science and linguistics, and the joint major in mathematics and computing science, the mathematics and computing science joint honors program, the cognitive science program (in co-operation with the Departments of Linguistics, Philosophy, and Psychology), and the 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 also offers a minor program that may be taken in conjunction with other major or honors programs or a general studies degree program. Computing Science students are encouraged to apply for a wide range of awards, scholarships and bursaries (FAS, University and/ or externally Administered). See “Financial Assistance and Awards” on page 42.

Transfer Credit and Residency Requirements

Transfer students are advised that residency requirements apply to all programs offered or jointly offered by the School of Computing Science. See “Residency Requirements” on page 108.

Prerequisite Grade Requirement

Registration in any computing science course normally requires that students obtain a C- or better in each prerequisite course. A minimum CGPA of 2.40 is required for entry into upper division computing courses.

Admission Requirements

Entry into computing science programs is possible via
• direct admission from high school
• direct transfer from a recognized post secondary institution, or combined transfer credit hours from more than one post secondary institution
• internal transfer from within Simon Fraser University

Admission is competitive. A separate admission average for each entry route is established each semester, depending on the number of spaces available and subject to the approval of the Dean of
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 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 in Computing Science. Applicants to Simon Fraser University should indicate their interest in the program by selecting the BSc major in Computing Science, Faculty of Applied Sciences as their first choice. Students will be selected primarily based on their 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 Simon Fraser 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 of Computing Science. For a general BSc degree with a major in computing science, 45 upper division credit hours must be completed, including the 39 credit hours of upper division course work 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 areas, including positions in government, business, or industry, and for graduate studies in computing science 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 II
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 232-3 Elementary Linear Algebra

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 course from the social sciences list, and two from the liberal arts course list.

Physical Sciences

Students choose one of
BISC 100-4 Introduction to Biology
BISC 102-4 General Biology
CHEM 120-3 General Chemistry I
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-3 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 121-3 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
CRIM 101-3 Introduction to Criminology
ECON 102-3 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
PSYC 100-3 Introduction to Psychology
PSYC 101-4 Introduction to Anthropology (A)
SA 150-4 Introduction to Sociology (S)
TECH 114-3 History and Theory of Technology and Culture
WWS 101-3 Introduction to Women's Issues in Canada

Upper Division Requirements

Major and honors students must consult an advisor before commencing upper division requirements. For more information, see www.cs.sfu.ca/undergrad/Advising.

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

General Information

Table of Contents.

Contents.

Computing Systems

MACM 300-3 Operating Systems I
CMPT 300-3 Operating Systems I
CMPT 307-3 Data Structures and Algorithms
CMPT 316-3 Numerical Analysis I
CMPT 346-3 Animation
CMPT 469-3 Special Topics in Computer Graphics
CMPT 477-3 Introduction to Formal Verification
CMPT 459-3 Special Topics in Database Systems
CMPT 454-3 Database Systems II
CMPT 459-3 Special Topics in Database Systems
CMPT 500-3 Operating Systems II
CMPT 579-3 Principles of Compiler Design
CMPT 580-3 Linear Programming
CMPT 583-3 Symbolic Computing
CMPT 587-3 Introduction to Formal Verification
CMPT 588-3 Introduction to Computer Music Theory and Sound Synthesis
CMPT 599-3 Special Topics in Computer Hardware
Information Systems

CMPT 310-3 Information Systems Management
CMPT 315-3 Data Communications and Networking
CMPT 379-3 Principles of Compiler Design
CMPT 400-3 High-Performance Computer Architecture
CMPT 401-3 Operating Systems II
CMPT 451-3 Networking II
CMPT 478-3 Special Topics in Computing Systems
CMPT 599-3 Special Topics in Computer Hardware
Information Systems

CMPT 301-3 Information Systems Management
CMPT 304-3 Database Systems I
CMPT 370-3 Information System Design
CMPT 454-3 Database Systems II
CMPT 459-3 Special Topics in Database Systems
CMPT 470-3 Web-based Information Systems
CMPT 475-3 Software Engineering II
CMPT 599-3 Special Topics in Computer Hardware

Computing Science

CMPT 307-3 Data Structures and Algorithms
CMPT 308-3 Computability and Complexity
CMPT 405-3 Design and Analysis of Computing Algorithms
CMPT 406-3 Computational Geometry
CMPT 407-3 Computational Complexity
CMPT 408-3 Theory of Computer Networks/Communications
CMPT 409-3 Special Topics in Theoretical Computing Science
MACM 300-3 Introduction to Formal Languages and Automata with Applications

Table II – Intensive Application Courses

CMPT 305-3 Computer Simulation and Modelling
CMPT 340-3 Computers in Biomedicine
CMPT 441-3 Introduction to Computational Biology

Table III – Computing Mathematics Courses

MACM 316-3 Numerical Analysis I
MACM 403-3 Symbolic Computation
MATH 308-3 Linear Programming
MATH 343-3 Combinatorial Aspects of Computing
MACM 416-3 Numerical Analysis II

Upper Division Requirements for a Major

For a major, students must satisfy the following requirements.

Breadth Requirement

Five courses from five of the six areas of concentration in table I must be completed including both of
MACM 300-3 Operating Systems I
CMPT 307-3 Data Structures and Algorithms

CMPT 354 is also recommended.

Depth Requirement

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.
• MACM 316 and
• CMPT 320 or CMNS 353

Other courses may be approved on submission of a detailed course outline to the school.

12 credit hours

BEd Credential

For a major in computing science in conjunction with a BEd program offered by the Faculty of Education, one additional CMPT course chosen from table I or table II must be completed, to total at least 30 upper division credit hours in CMPT courses.

3 credit hours

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.

18 credit hours

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 and 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.

18 credit hours

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

24 credit hours

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

18 credit hours

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 361-3 Introduction to Computer Graphics
CMPT 363-3 User Interface Design
CMPT 365-3 Multimedia Systems
MACM 316-3 Numerical Analysis I

21 credit hours

At least six of the following are required, three of which must be at the 400 division, three must be designated CMPT and two must be non-CMPT courses.

CMNS 358-4 Sound Tape Recording: Theory and Use
CMNS 399-4 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 Sound 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 486-3 Animation
CMPT 489-3 Special Topics in Computer Graphics
FPA 211-5 The Arts in Context: Selected Topics
UNIVERSITY OF SASKATCHEWAN – Faculty of Engineering – School of Computer Science

The completion of a Bachelor of Science degree in computer 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

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 divisions.

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 491-3 Software Engineering Tools and Environments
CMPT 499-3 Special Topics in Programming Languages
MACM 361-4 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).

6 credit hours

Simon Fraser University – Zhejiang University Dual Degree Program

A unique, cohort-based 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’ under Program/Plan in Computing Science, Faculty of Applied Sciences.

Admission is competitive and enrollment is limited.

The program begins each fall semester. 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 ccschina@sfu.ca.

Program Structure

Thesis a five year cohort program. All core courses are scheduled according to the articulation documents at www.cs.sfu.ca/SFU-ZU.

First Year

All students will be at their home university. Simon Fraser University students take customized intensive Chinese language courses in addition to the foundational computing science courses.

Second and Third Year

All students study as a cohort at Zhejiang University.

Fourth and Fifth Year

All students study at Simon Fraser University.

The option for co-operative education is available to students after the sixth semester. Upon completion, students receive dual degrees from Simon Fraser University and Zhejiang University.

Program Fee

International students attending the SFU-ZU dual degree program will pay the basic Simon Fraser University tuition in year two and three when studying in Zhejiang University in China. In year one, four, and five, international students will pay differential tuition when studying at Simon Fraser University. All students must also pay the $700 program fees each year (co-op education fees are extra).

Students are responsible for travel, accommodation, insurance, textbooks and general living expenses. While in China, books, housing, meals, transportation and living expenses will be lower than in Canada.

Dual Degree Credential

Students must complete 150 Simon Fraser University credit hours, excluding credit hours associated with co-op education. Within the 150 credit hours, the following requirements must be met.

Simon Fraser University students may use at most 15 credit hours of Chinese language to meet the 150 credit hours required for the degrees.

Students must complete the core courses as specified in the articulation documents at www.cs.sfu.ca/SFU-ZU. For Simon Fraser University students, this requires the completion of CMPT 120, 125, MACM 101 and ASC 200 in year one.

All students must complete the following courses at Simon Fraser University.

CMPT 300-3 Operating Systems I
CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems I
CMPT 371-3 Data Communications and Networking
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) numbered at the 300 level.

four CMPT courses from four different areas in Table I, numbered 400 or higher.

12 credit hours of upper division electives

CMPT 497 (capstone projects) at either semester 10 or summer 2, the projects will be proposed and supervised by Simon Fraser University faculty members.

One additional course from Table I, II, or III must be completed, plus one of CMPT 320 or CMNS 353.

Co-operative Education

Students may choose up to two semesters for co-operative education. Due to visa and co-operative education restrictions, the final program semester may not be used for co-operative education.

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 semester, 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.

one of*
CMPT 125-3 Introduction to Computing Science and Programming
CMPT 126-3 Introduction to Computing Science and Programming
CMPT 127-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
MACM 101-3 Discrete Mathematics I
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 I

or any 100 division ENGL course 18-22 credit hours
*to aid your choice, prior to registration, complete the self-evaluation test at www.cs.sfu.ca/undergrad/Advising/120-126/

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).

15 credit hours

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 registration, appeals and graduation processing are handled by the School of Computing Science.
Faculty of Applied Sciences – School of Computing Science 115

Lower Division Requirements
(46–51 credit hours)

Students complete all of
MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
and one of
BUEC 232-4 Data and Decision 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’s lower division requirements (see “Social Sciences” on page 112).

46–51 credit hours

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 registration, 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 128 in the Faculty of Arts and Social Science, and also see “Residency Requirements” on page 108 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 the Department of Molecular Biology and Biochemistry section (page 220) under the Faculty of Science.

Student registration, 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 Information Systems in 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 191.

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), in addition to those listed in the Business Administration section for the joint major.

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 218.

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 136 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 214 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 I
CMPT 126-3 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 I
MACM 201-3 Discrete Mathematics II
*to aid your choice, prior to registration, 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/

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 231.

School of Engineering Science


Director
M. Safi BSEC, MSEE, PhD (Cleveland), PEng

Professors Emeriti
T.W. Calvert BSc(Eng) (Lond), MSEng (Wayne), PhD (Carnegie Tech), PEng
V. Cuperman MSc (TI Bucharest), SB, MS, PhD (Calif), PEng
J.C. Dil BSc(Br Co), BS (N Carolina), PhD (Cal Tech), PEng
D.A. George BEng(McG), MS (Stan), ScD (MIT), PEng

Professors
J.S. Bird BScE (Br Co), PhD (Car), PEng
C.R. Bolognani BEng (McG), MEng (Car), PhD (Calif)
J.K. Cavers BSc, PhD (Car), PEng, Canada Research Chair
G.H. Chapman BSc, MSc (Qu), PhD (McM), PEng
W.A. Gruver BSEE, MSEng (Penn), DIC (Imperial Coll, London), PhD (Penn), PEng
K.K. Gupta BTech (IIT Delhi), MEng, PhD (McG), PEng
R.H.S. Hardy BSc(Eng), PhD (Alta), PEng
P.K.M. Ho BSE, BE (Sask), PhD (Qu), PEng
R.F. Hobson BSc(Br Co), PhD (Wat)
B. Kamiska MSc, PhD (Warw)
J.B. Kuo BS (Natif Taiwan), MS (Ohio State), PhD (Stan)
A.M. Leung BS, MS, PhD (Case W Reserve), PEng
M. Parameswaran BE (Mad), MSc, PhD (Alta), PEng
S. Payande BSc, MS (Akron), MSc, PhD (Tor), PEng
A.H. Rawicz MSc (Cracow), PhD (Gliwice)
M. Safi BSc, MSc, PhD (Cleveland), PEng
S. S. Stapleton BEng, MEng, PhD (Carleton), PEng
M. Szryczki MSc, PhD (Warsaw)
L. Trajkovic DipeleEng (Pristina), MS (Syri), PhD (Calif)
R.G. Vaughan BE, ME (Cant), PhD (Aalborg), Sierra Wireless Chair

Associate Professors
J.D. Jones BSc (Sus), PhD (Reading), PEng
D.I. Kim BS (Seoul NT), MS, PhD (Calif), PEng
D.C. Lee BS, BSEE (Maryland), MSc, PhD (MIT)
S.N. Robinnovitch BSc (Br Co), MSc, PhD (Harvard/MIT), Canada Research Chair**

Assistant Professors
I.V. Bajg BSc (Natal), MSEE, MSc, PhD (Rensselaer)
M.F. Bajg BTech (Kharagpur), MSEE (Boston), PhD (Johs H)
B.L. Gray BSc (Rensselaer), MSc, PhD (Calif)
K. Karim BSc, PhD (Wat), PEng
J. Liang BE, ME (Xi’an Jiaotong), ME (NU Singapore), PhD (Johs H), PEng

Adjunct Professors
G. Cristensen BSc (Alta), MASc, PhD (Br Co)
D. Kotak BEng (Bom), MS (Calif)
J.A. McEwen BSc, PhD (Br Co), PEng
R. Randhawa BEng (Thapar IET), MSc (Sask), PhD (S Fraser)
J. Wu BSc (Shandong Polytech), MSc (Coventry), PhD (Wales)

Associate Members
M. Donelan, Kinesiology
J.A. Hoffer, Kinesiology

Senior Lecturers
P. Leung BSEE (Texas Tech), PEng
L. One BSc (S Fraser)
S.A. Stevenson BA, MA (Br Co)
S. Whitmore BA (Nelson), MA (S Fraser)

Lecturers
A. Hajishirvahmamadi BSc, MSc (Isfahan), PhD (Wat)
W.C. Scratchley BSc (S Fraser), PhD (Car)
M. Sjodinsma BSc, MSc (S Fraser)

*joint appointment with physics

Advisors
Dr. A. Hajishirvahmamadi BSc, MSc (Isfahan), PhD (Wat), Program Planning and Graduation Advisor, 9825 Applied Science Building, 604.291.7019, ensc_advise_lz@sfu.ca
Mr. A. Jenkins, Co-operative Education Advisor, 9701 Applied Science Building, 604.268.6703, djenkins@sfu.ca
Ms. G. Litchfield, Co-operative Education Advisor, 9701 Applied Science Building, 604.268.6931, gwen_litchfield@sfu.ca
Dr. W.C. Scratchley BSc (S Fraser), PhD (Car), Program Planning and Graduation Advisor, 10830 Applied Science Building, 604.291.4428, ensc_advise_ak@sfu.ca

Programs Offered

Engineering Science Program
This program leads to a BASc or BEng (Honors) 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
The minimum admission average will vary depending on the number of applications received, and/or spaces available. In no case will admissions be on the number of applications received, and/or spaces available. Successful applicants may have exceeded a CGPA of 2.7 or equivalent in a full course load of relevant courses prior to entry.

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 108.

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 and the school’s website (www.ensc.sfu.ca) for more information.

In addition, the Canadian Engineering Accreditation Board (CEAB) requires that one complementary studies elective in the ENSC curriculum must be in the Central Issue, Methodology, and Thought Process category.

BASc 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 engineerscientists who have entrepreneurial skills and attitudes and who are oriented to new technologies. Program entry is on a competitive basis.

Students must achieve a cumulative grade point average (CGPA) and an upper division grade point average (UGDPA) 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 UGDPA 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 specialized option. The general BASc program may 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.

Admission to the school is competitive and enrollment is limited. The program begins each fall but some students may enter in the spring or summer semester. Engineering admission inquiries may be sent by e-mail to ensc-adm@sfu.ca. More detailed admission information is on the web at www.ensc.sfu.ca.
Industrial Experience
Every student must complete a co-op education program of at least three work semesters. After the first year, students typically alternate between academic and work semesters. 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 semester (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 semester (ENSC 194) is also available through the engineering science co-operative education office and is often taken after the first two semesters of study. ENSC 194 does not count toward the mandatory three course requirement.

The engineering science co-operative education 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 course (ENSC 440) and an undergraduate thesis (ENSC 486 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 only available with the honors.

Graduation with BASc (honors) requires both a cumulative grade point average (CGPA) and a 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 semester 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 but in most cases the work site is off campus. A member of the external organization and a faculty to register in some courses. A pre-approved complementary studies course list is available from the school.

Other courses and electives may be acceptable with undergraduate curriculum committee chair approval.

Engineering Science
Common Core

Courses and Typical Schedule
Semester One (Fall)
CHEM 121-4 General Chemistry and Laboratory I
ENSC 100-3 Engineering Technology and Society*
ENSC 101-1 Writing Process, Persuasion and Presentations**
ENSC 150-3 Introduction to Computer Design*
MATH 151-3 Calculus I*
PHYS 120-3 Modern Physics and Mechanics***
17 credit hours

Semester Two (Spring)
CMPT 128-3 Introduction to Computing Science and Programming for Engineers*
ENSC 102-1 Form, Style and Professional Genres*
ENSC 151-2 Digital and Computer Design Laboratory*
MATH 152-3 Calculus II*
MATH 232-3 Elementary Linear Algebra*
PHYS 121-3 Optics, Electricity and Magnetism*
PHYS 131-2 General Physics Laboratory B
17 credit hours

Semester Three (Fall)
CHEM 1xx-3 contact School of Engineering Science
for details (B)
CMPT 225-3 Data Structures and Programming (B)
ECON 103-3 Principles of Microeconomics (E,C,P,S)
ENSC 220-3 Electric Circuits I*
ENSC 250-3 Introduction to Computer Architecture*
MACM 101-3 Discrete Mathematics II (C,S)
MATH 251-3 Calculus III*
MATH 310-3 Introduction to Ordinary Differential Equations*
PHYS 211-3 Intermediate Mechanics (P)
STAT 270-3 Introduction to Probability and Statistics* (E)
18 credit hours

Semester Four (Summer)
CMPT I-3 first complementary elective* (P,S)
CMPT 225-3 Data Structures and Programming* (C,S)
ENSC 204-1 Graphical Communication for Engineering*
ENSC 224-3 Electronic Devices* (C,E)
ENSC 320-3 Electric Circuits II* (B,C,E)
ENSC 350-3 Digital Systems Design (B)
KIN 208-3 Introduction to Physiological Systems* (B)
MATH 254-3 Vector and Complex Analysis* (B,E,P,S)
PHYS 221-3 Intermediate Electricity and Magnetism* (P,E,S)
STAT 270-3 Introduction to Probability and Statistics* (C,P,S)
17 credit hours

*should be taken in the designated semester;
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 GERO 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 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.

Rehabilitation and Assistive Devices Concentration
one Socl elective must be KIN 448-3; three ENSC electives must be ENSC 387, 472, and 429

Biomedical Signals and Instrumentation Concentration
three ENSC electives must be ENSC 374, 429, and 474

Biomedical Electronics 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 the 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.

Semester Five (Spring)
CMPT 275-4 Software Engineering
M ACM 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

Semester Six (Fall)
CMPL I-4 first complementary elective
ENSC 325-4 Microelectronics II
ENSC 327-4 Communication Systems
ENSC 383-4 Feedback Control Systems
Sci I-4 first science elective
18 credit hours

Semester Seven (Spring)
CMPT 300-3 Operating Systems I
ENSC I-4 first Engineering Science elective
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

Semester Eight (Fall)
CMPL II-3 second complementary studies elective
ENSC II-4 second Engineering Science elective
ENSC 201-3 The Business of Engineering
ENSC 450-4 VLSI Systems Design
Sci II-3 second science elective
17 credit hours

Additional Requirements for Honors
ENSC 498-3 Engineering Science Thesis Proposal (H)

ENSC 499-9 Engineering Science Undergraduate Thesis (H)
Total 139 credit hours (G); 151 credit hours (H)
*should be taken in the designated semester. 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, 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.

4Note: 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 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.

Semester Five (Spring)
ENSC 304-1 Human Factors and Usability Engineering
ENSC 330-4 Engineering Materials
ENSC 390-3 Digital Systems Design
ENSC 351-4 Real Time and Embedded Systems
ENSC 380-3 Linear Systems
PHYS 324-3 Electromagnetics
18 credit hours

Semester Six (Fall)
CMPL I-3 first complementary elective
ENSC 325-4 Microelectronics II
ENSC 327-4 Communication Systems
ENSC 383-4 Feedback Control Systems
Sci I-3 science elective
18 credit hours

Semester Seven (Spring)
ENSC 305-1 Project Documentation and Team Dynamics
Ensc I-4 first Engineering Science elective
ENSC 440-4 Capstone Engineering Science Project
MACM 316-3 Numerical Analysis I
18 credit hours

Semester Eight (Fall)
CMPL II-3 second complementary studies elective
Ensc II-4 second Engineering Science elective
ENSC 406-2 Social Responsibility and Professional Practice
ENSC 440-4 Capstone Engineering Science Project
MACM 316-3 Numerical Analysis I
18 credit hours

Additional Requirements for Honors
ENSC 498-3 Engineering Science Thesis Proposal (H)

ENSC 499-9 Engineering Science Undergraduate Thesis (H)
Total 139 credit hours (G); 151 credit hours (H)
*should be taken in the designated semester. 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 pre-approved electives list available from the school. Under special circumstances, approval for other courses from the undergraduate curriculum committee chair may be granted.

4Note: 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.

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.

Semester Five (Spring)
ENSC 304-1 Human Factors and Usability Engineering
ENSC 320-3 Electric Circuits II
ENSC 380-3 Linear Systems
PHYS 232-2 Introductory Physics Laboratory A
PHYS 324-3 Electromagnetics
PHYS 344-3 Thermal Physics
PHYS 365-3 Semiconductor Device Physics
18 credit hours

Semester Six (Fall)
ENSC 325-4 Microelectronics II
ENSC 327-4 Communication Systems
ENSC 351-4 Real Time and Embedded Systems
ENSC 383-4 Feedback Control Systems
PHYS 384-3 Methods of Theoretical Physics
19 credit hours

Semester Seven (Spring)
ENSC 440-4 Capstone Engineering Science Project
Ensc I-4 first Engineering Science elective
ENSC 440-4 Capstone Engineering Science Project
MACM 316-3 Numerical Analysis I
18 credit hours

Semester Eight (Fall)
CMPL II-3 second complementary studies elective
Ensc III-4 third Engineering Science elective
Ensc IV-4 fourth Engineering Science elective
Ensc V-4 fifth Engineering Science elective (G)
ENSC 201-3 The Business of Engineering
Tech I-3 technical (computing science, science or math) elective (H)
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 141 credit hours (G); 152 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 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.
**ENSC 201-3** The Business of Engineering
**PHYS 332-3** Intermediate Laboratory
**PHYS 355-3** Optics
**Phys 4XX-3** physics elective 19 credit hours

### Other Requirements
ENSC 498-3 Engineering Science Thesis Proposal
ENSC 499-9 Engineering Science Undergraduate Thesis

**Total 155 credit hours**

* should be taken in the designated semester; 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, 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.

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.

### Systems Option
This option prepares for careers in design and integration of computer-controlled machines, and provides for graduate study in robotics, control and mechatronic systems. Students integrate knowledge from electronic engineering, mechanical engineering, and computer engineering into the fundamental design process. This focused program includes study of mechanical structures and mechanisms, electro-mechanical sensors and actuators, control engineering, and real-time systems. Electives may be used to tailor curriculum to specific interests.

### 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.

#### Semester Five (Spring)
ENSC 230-4 Introduction to Mechanical Design*
ENSC 304-1 Human Factors and Usability Engineering*
ENSC 320-3 Electric Circuits II*
ENSC 330-4 Engineering Materials*
ENSC 351-4 Real Time and Embedded Systems*
ENSC 380-3 Linear Systems* 19 credit hours

#### Semester Six (Fall)
Cmp II-3 second complementary elective¹
ENSC 325-4 Microelectronics II*
ENSC 383-4 Feedback Control Systems*
ENSC 387-4 Introduction to Electromechanical Sensors and Actuators*
Scie I-3 science elective² (G) 18 credit hours

#### Semester Seven (Spring)
Ensc I-4 first Engineering Science elective²
ENSC 305-1 Project Documentation and Team Dynamics*
ENSC 406-2 Social Responsibility and Professional Practice*
ENSC 440-4 Capstone Engineering Science Project
ENSC 483-4 Modern Control Systems*
MACM 316-3 Numerical Analysis I 18 credit hours

### Semester Eight (Fall)
ENSC 201-3 The Business of Engineering
ENSC 488-4 Introduction to Robotics*
ENSC 489-4 Computer Aided Design and Manufacturing*
Ensc II-4 second Engineering Science elective² 15 credit hours

### Additional Requirements for Honors
ENSC 498-3 Engineering Science Thesis Proposal (H)
ENSC 499-9 Engineering Science Undergraduate Thesis (H)

* should be taken in the designated semester; 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, 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.

**must be an approved course; consult 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.

### Minor in Computer and Electronics Design

#### Admission Requirements
Minor program entrance is open to all Simon Fraser University non-engineering science majors. Apply by letter to the Admissions Chair, School of Engineering Science, after completing a minimum of 15 credit hours, including CMPT 150 or ENSC 150, with a cumulative GPA of at least 3.5. Enrolment is limited.

### Program Requirements
This program is comprised of courses from the computer engineering option and the electronics engineering option. Students must complete all of ENSC 150-3 Introduction to Computer Design
ENSC 151-2 Digital and Computer Design Laboratory
ENSC 220-3 Electric Circuits I
ENSC 250-3 Introduction to Computer Architecture
ENSC 305-1 Project Documentation and Group Dynamics
ENSC 320-3 Electric Circuits II
ENSC 340-3 Engineering Science Project
ENSC 380-3 Linear Systems

Program Required courses plus at least one of
ENSC 225-4 Microelectronics I
ENSC 351-4 Real Time and Embedded Systems

### Applied Sciences One
This is a challenging program of first year study for those who are interested in the applied sciences. It includes courses relevant to the study of communication, computing science, engineering science and kinesiology.

Applied Sciences One consists of two semesters of course work based on the following models. Students may vary these models and make substitutions in consultation with the program advisor.

### Recommended First Semester Course Work
CMNS 110-3 Introduction to Communication Studies
CMPT 101-4 Introduction to Computer Programming
ENSC 150-3 Introduction to Computer Design
KIN 142-3 Introduction to Kinesiology
MATH 151-3 Calculus I

### Recommended Second Semester Course Work
one of
CMNS 130-3 Explorations in Mass Communication
REM 100-3 Global Change
all of
ENGL 199-3 University Writing
MATH 108-3 Calculus II
and one of
BISC 101-4 General Biology
CHEM 112-1 General Chemistry and Laboratory I
PHYS 120-3 Modern Physics and Mechanics

Upon completion of Applied Science One, it is expected that most students will apply to one of the major programs in Faculty of Applied Sciences schools. Students may also wish to pursue a major-minor combination involving two schools. Alternatively, students may continue on with the general studies program leading to the Bachelor of General Studies (Applied Sciences). Course planning for second and subsequent years should be carried out in consultation with the program advisor.
Bachelor’s Degree Program

The Bachelor of General Studies (Applied Sciences) is a non-specialist program that offers students a broad 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 108.
• 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 CGPA and UDGPA 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 minors by the schools or departments concerned.

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.

Admission Requirements

Entry is possible via direct admission from high school, direct transfer from a recognized post secondary institution, or internal transfer from within Simon Fraser University. Admission is competitive. A separate admission average for each entry route is established each semester depending on available spaces and subject to the approval of the Dean of Applied Sciences.

Admission averages and calculations for direct program admission (either from high school or post secondary) are the same as those used for admission to the computing science major program. Simon Fraser University internal transfer students are assessed based on the lower division requirements GPA (see below). Only Simon Fraser University courses are used to calculate the GPA. If courses have been duplicated (repeated), the grades from all course attempts are used equally to calculate the average. Application can be made any time after at least 18 Simon Fraser University lower division credit hours (100 or 200 division courses) have been completed, and all 100 division requirements (completed at either Simon Fraser University or a BC community college) have been satisfied.

Students must maintain a 2.5 CGPA to remain in the 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 more information.

Major Program

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 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Hydrography
GEOG 216-3 Geologic and Environmental Science
GEOG 218-3 Introduction to Cartography and Mapping
GEOG 221-3 Economic Geography
GEOG 250-3 Cartography I
GEOG 251-3 Geophysical and Environmental Science
GEOG 252-3 Geographical Information Science I
MACM 201-3 Discrete Mathematics I
MACM 202-3 Discrete Mathematics II
MATH 151-3 Calculus I
MATH 153-3 Calculus II
MATH 232-3 Linear Algebra
and one of GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Hydrography
GEOG 216-3 Geologic and Environmental Science
GEOG 218-3 Introduction to Cartography and Mapping
GEOG 221-3 Economic Geography
GEOG 250-3 Cartography I
GEOG 251-3 Geophysical and Environmental Science
GEOG 252-3 Geographical Information Science I
MACM 201-3 Discrete Mathematics I
MACM 202-3 Discrete Mathematics II
MATH 151-3 Calculus I
MATH 153-3 Calculus II
MATH 232-3 Linear Algebra
and one of GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Hydrography
GEOG 216-3 Geologic and Environmental Science
GEOG 218-3 Introduction to Cartography and Mapping
GEOG 221-3 Economic Geography
GEOG 250-3 Cartography I
GEOG 251-3 Geophysical and Environmental Science
GEOG 252-3 Geographical Information Science I
MACM 201-3 Discrete Mathematics I
MACM 202-3 Discrete Mathematics II
MATH 151-3 Calculus I
MATH 153-3 Calculus II
MATH 232-3 Linear Algebra

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 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 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 255-3 Geographical Information Science I
MACM 101-3 Discrete Mathematics I
MACM 201-3 Discrete Mathematics II
MATH 151-3 Calculus I
MATH 153-3 Calculus II
MATH 232-3 Linear Algebra
and one of GEOG 213-3 Geomorphology I
GEOG 214-3 Climatology I
GEOG 215-3 Hydrography
GEOG 216-3 Geologic and Environmental Science
GEOG 218-3 Introduction to Cartography and Mapping
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
and one of CMPT 300-3 Operating Systems I
CMPT 363-3 User Interface Design
CMPT 371-3 Data Communications and Networking
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 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 program advisor in choosing these credit hours.

and three additional upper division credit hours in CMPT or MACM courses. (45 credit hours)
School of Interactive Arts and Technology

Simon Fraser University Surrey, Central City, 250–3450 102nd Avenue, Surrey, BC V3T 0A3, 604.268.7444 Tel, 604.268.7488 Fax, www.siat.sfu.ca

Director
J. Bowes AB (Hamilton College), MSc (Syr), PhD (Mich State)

Professor Emeritus
T.W. Calvert BScEng (Lond), MSEE (Wayne), PhD (Carnegie Tech), PEng
J.C. Dill BASc (Br Coll), MS (N Carolina), PhD (Cal Tech), PEng

Professors
J. Bowes AB (Hamilton College), MSc (Syr), PhD (Mich State)
R. Woodbury BA (Car), MS, PhD (Carnegie-Mellon)

Associate Professors
J. Budd MVA (Alta)
S. DiPaola BSc (NY State), MA (NY Tech)
E.J. Fee BA, MA, PhD (Br Coll)
B.D. Fisher BA (Hiram Coll), PhD (Calif)
D.J. Gromala BFA (Mich), MFA (Yale)
M.K. Hatala MSc, PhD (Kosice Tech)
S. Kozel BComm (MCG), MA, PhD (Essex)
V. Kyrkoff BS (Air Def Radio Eng, Kharkov), MS (Kharkov State), DS (Kharkov Military)
T. Schiphorst BGS, MA (SF Fraser)
C. Shaw BMath (Wat), MSc, PhD (Alta)
R. Wakkary BFA (Nova Scotia Art & Des), MFA (NY State)

Assistant Professors
A.N. Antle BA, BASc (Wat), PhD (Br Coll)
L.R. Bartram BA (Br Coll), MMath (Wat), PhD (S Fraser)
B. Ben Youssef BSc, MSc, PhD (Houston)
J. Bizzozzi BA (Mich), MS (MIT)
M. Dobson BSc (Man), MS (Sus), PhD (Open, UK)
M.V. Engeli MDesS (Harvard), MArch (Swiss Fed Tech)

V. Kumar BPhysics, MComputer Science (B’thiar), PhD (Sask)
J. McCracken BSc (Wash), PhD (Open, UK)
K. Newby BA, MFA (S Fraser)
A.D.R. Niranjan BSc, MFA (Lond)

Senior Lecturer
R. Taylor BA, MA (Br Coll)

Lecturers
S. Clements-Vivian BFA (Emily Carr)
Y. Dancer BFA (Emily Carr), MFA (S Fraser)
C. Gibson BA, MA (Br Coll)
K. Maas BA (Minn), MA (Car)
C. Poremba BA (Wat), MASC (S Fraser)
H. Serban BSc, MSc (Timisoara)
M. Sturgess BA, MA (SF Fraser)
Y. Yang BEng (Northeastern, China), MAdmin (Car), MSc (S Fraser)

Advisor
Room 845, 2400 Central City, 604.268.7444 Tel, 604.268.7478 Fax, siat_advising@sfu.ca, 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

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)

TechOne Program

Students in the School of Interactive Arts and Technology complete their first year in the TechOne cohort program at Simon Fraser University Surrey. See “TechOne Program” on page 127 for further information.

Four Streams

Until now, SIAT has offered Information Technology and Interactive Arts programs, the latter divided into Performance & Media Art and Interaction Design streams. The other two streams, meanwhile, have been extensively revised, and out of that work has evolved a new, related fourth stream: New Media Environments.

The School of Interactive Arts and Technology offers a general program leading to BSc and BA degrees with major or honors in Interactive Arts and Technology. Students seeking the major or honors elect one of four streams: Performance and Media Arts, Interaction Design, New Media Environments and Technology in Art and Design.

All streams in the program 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, which leads directly to its particular pattern of study and set of graduate outcomes.

Program Structure

The streams achieve their ends by a common curricular structure. Each has a set of core courses in both lower and upper division taken by all students in the stream aimed at producing specific graduate outcomes. There is significant sharing of course content among the streams, especially within the electives. Even within the sets of required courses, there is overlap reflecting the fact they are all part of a common program. The common academic threads shared by all four streams include the TechOne foundation year, four SIAT courses for the BA degree and an additional five common courses for the BSc degree. Students must complete:

• TechOne or equivalent 21 credit hours,
• SIAT lower division core,
• BA or BSc degree requirements, and
• one of the four stream requirements.

Each stream has 30 upper division credit hours specified that count towards the major. At least 120 credit hours are required including at least 45 upper division credit hours. Within each stream are required core courses, stream-related electives, program-wide electives and free electives to be taken from courses outside of the program. It should be noted at the outset that whichever a list of elective courses is presented, the actual offerings in any given year may be less than those shown.

Admission Requirements

Admission to the School of Interactive Arts and Technology is possible through four routes.

1. Direct admission from BC high school 12 or equivalent high school preparation in accord with the requirements listed under the Admission and
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 taking 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 for more information.

Major Program

Degree Requirements

Students entering a major in Interactive Arts and Technology will normally apply to either the BA or BSc program after completion of TechOne or its equivalent.

BSc Degree Requirements

The BSc lower division requirements, plus a combination of 30 upper division science credit hours. Approved upper division science credit hours include the following: any approved upper division course in the Science and Technology stream; any approved upper division course from the Faculty of Applied Sciences. Management and Systems Science, Mathematics

BA Degree Requirements

The BA lower division requirements, plus a combination of 30 upper division arts credit hours. Approved upper division arts credit hours include the following: any approved upper division course in the Performance and Media Arts stream; any approved upper division course in the New Media Environments stream; any upper division course from Communication, Cognitive Science, Contemporary Arts, Geography, Philosophy, Business.

Lower Division Requirements

The lower division requirements for all planned IAT major and honors programs consist of the 21 credit hours of TechOne core courses (including an approved mathematics course), 12 credit hours of SIAT core courses, the BA or BSc requirements below plus 15 credit hours of lower division requirements in one of the four streams. SIAT Lower Division Core Courses (12 credit hours)

The SIAT lower division core currently is as follows.

BA Lower Division Core (45 credit hours minimum)

In addition to the 21 credit hours of TechOne and 12 credit hours of SIAT lower division core, students must complete 12 credit hours of TechOne core courses, currently IAT 301, IAT 313, IAT 314, IAT 410 and IAT 445. and SIAT upper division courses, if required, to bring the total to at least 30 credit hours.

New Media Environments Stream

The New Media Environments stream is concerned with the creation, analysis and understanding of new media. New media environments are both computational artifacts and cultural experiences. They are therefore highly emergent phenomena that are deeply rooted in historical, social, aesthetic, and economic processes. Graduates of this stream 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.

Lower Division Requirements (48 credit hours minimum)

For the major, students must complete 15 credit hours of stream-specific courses, currently comprising the following:

IAT 204-3 Encoding Media Practice

at least two lower division media electives (List 1)

at least one lower division cultural theory electives (List 2)

Upper Division Requirements (30 credit hours)

Students must complete all of the 21 credit hours of NME upper division core courses, currently IAT 301, IAT 313, IAT 314, IAT 410 and IAT 445, and at least 12 credit hours from the following, including at least nine of NME studio courses.

BA Lower Division Core Courses (12 credit hours)

The SIAT lower division core currently is as follows.

The New Media Environments stream is concerned with the creation, analysis and understanding of new media. New media environments are both computational artifacts and cultural experiences. They are therefore highly emergent phenomena that are deeply rooted in historical, social, aesthetic, and economic processes. Graduates of this stream 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.

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For the major, students must complete 15 credit hours of stream-specific courses, currently comprising the following:

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BA Lower Division Core Courses (12 credit hours)

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at least one lower division cultural theory electives (List 2)

Upper Division Requirements (30 credit hours)

Students must complete all of the 15 credit hours of NME upper division core courses, currently IAT 301, IAT 313, IAT 314, IAT 410 and IAT 445, and at least 12 credit hours from the following, including at least nine of NME studio courses.

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The SIAT lower division core currently is as follows.

The New Media Environments stream is concerned with the creation, analysis and understanding of new media. New media environments are both computational artifacts and cultural experiences. They are therefore highly emergent phenomena that are deeply rooted in historical, social, aesthetic, and economic processes. Graduates of this stream 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.

Lower Division Requirements (48 credit hours minimum)

For the major, students must complete 15 credit hours of stream-specific courses, currently comprising the following:

IAT 204-3 Encoding Media Practice

at least two lower division media electives (List 1)

at least one lower division cultural theory electives (List 2)
and SIAT upper division courses, if required, to bring the total to 30 credit hours.

Interaction Design Stream
This examines the relationship between people and technology to improve our environment through a reflective design process incorporating interactive technology. The fundamental outcomes are a combination of creative action and critical thought that shape the way people make and use highly interactive products, systems and environments.

Lower Division Requirements (48 credit hours minimum)
For the major, students complete 15 stream-specific credit hours currently comprising the following:
- nine credit hours of ID core lower division courses: IAT 230, IAT 231, and IAT 232.
- and six credit hours from the following courses: PSYC 100, KIN 142, CMPT 225, STAT 270.
- one lower division cultural theory elective from List 2.

Upper Division Requirements (30 credit hours)
Students must complete all of:
- at least 18 credit hours from ID upper division courses currently comprising: IAT 302, IAT 331, IAT 332, IAT 333, IAT 335, IAT 338, IAT 430, IAT 431.
- and at least nine credit hours from the following, including at least six of IAD studio courses.
- IAD studio courses: IAT 400, IAT 411, IAT 412 IAD elective courses: IAT 301, IAT 312, IAT 313, IAT 391, IAT 392, IAT 393, IAT 394, IAT 401, IAT 410, IAT 480, IAT 481, IAT 485.
- and SIAT upper division courses, if required, to bring the total to at least 30 credit hours.

Honors Program
An honors degree in Interactive Arts and Technology is available in all four streams: Performance and Media Arts, Interaction Design, New Media Environments and Technology in Art and Design.

Lower Division Requirements
Identical to the major for all streams.

Upper Division Requirements
For all streams, 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 490-4 and IAT 491-6. 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 60 upper division credit hours minimum, 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 is available. This is not specific to any stream.

Lower Division Requirements
Students must complete a total of 27 credit hours comprised of the course requirements for TechOne plus both of IAT 200-3 Cognition for Design Science IAT 201-3 Usability in Interactive Environments

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 231.

School of Kinesiology
K9625 Shrum Science Centre, 604.291.3573 Tel, 604.291.3040 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), MPhil, PhD (Lond)
A.J. Davison BSc (Cape Town), MSc, PhD (Rutgers)
W.D. Ross BPE (Br Coll), MA, MS, PhD (Ore), FASCM
H. Weinberg BSc, MSc, PhD (Washington)

Professors
P.N. Bawa BSc, MSc (Panjab), MSc, PhD (Alta)
J. Dickinson BA (Birm), PhD (Nott)
D.T. Finegood BScNE (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. Marteniuik BPE, MA (Alta), EdD (Calif)
T.E. Miller BSc, MSc, PhD (Alta)
J.B. Morrison BSc (Glasc), PhD (Strath), ARCSS
W.S. Parkhouse BPE (Alta), MPE, PhD (Br Coll)
M.P. Rosin BSc (Sask), PhD (Tor)
G.F. Tibbits BEd (McG), MSc, PhD (Calif), Canada Research Chair

Associate Professors
A.P. Blaber BSc (Gueip), BeD (WOnt), MSc (Gueip), 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. Vieira 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. Loman MBChB (Manc), DObst (Royal College of Obstetrics and Gynaecology), FRCS
P. Pretorius BSc, MSc (Pothchefstroom), DSc (Amst)
D. Robinson BSc (Br Coll), MSc, PhD (S Fraser)
I. Rossberg-Gempont BA (S Fraser), MA (Wlaur), PhD (S Fraser)
R.A. Strath MSc (Br Coll), PhD (Alta), OD (New Eng Omptory)
L. Zhang BDS Dentistry (Western China), PhD (Tor)

Senior Lecturers
J. Anthony BSc, MSc (Madr), PhD (All India IMS)
R.C. Amsudson 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)

*joint appointment with engineering science

Advisors
Ms. D. Bemister BSc (S Fraser), Co-operative Education Co-ordinator, K9620 Shrum Science Centre, 604.291.4541, bemister@sfu.ca

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.

The school builds on the basic sciences to link the study of movement, physiology and health with the broad scope of human endeavour. Our faculty comprises anatomists, biochemists, biologists, biomechanists, biophysicists, engineers, ergonomists, kinesiologists, physicans, psychologists and psychologists. We apply our knowledge to study structure and function throughout the life cycle in health and disease, in benign and extreme environments, at work, at home, and at play.

Our educational goals impart a sound knowledge base and to promote critical thinking, problem solving, research, technical and communication skills appropriate to the field, through our undergraduate, graduate and continuing studies programs.

To this end, we strive for excellence in teaching, research and service programs focused on the following aspects of the human condition.

• movement and its control
• regulation and adaptation of physiological systems
• growth, development and aging

and on the following applied disciplines:

• health promotion
• prevention of injury and disease
• functional evaluation and rehabilitation

and human factors/ergonomics

environmental, exercise and work physiology

Transfer Credit and Residency Requirements
Transfer students are advised that residency requirements apply to kinesiology programs. See “Residency Requirements” on page 108.

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 can apply to the British Columbia College of Teachers (BCCT) to have their degree accepted for professional certification. BCCT reviews each
application individually. Contact the School of Kinesiology for more information.

**Prerequisite Course Grade**

Students wishing to register for kinesiology courses must have obtained a grade of C- or better in prerequisite 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 for information.

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**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 semester, depending on spaces available and subject to the dean’s approval. Admission averages are calculated on five required courses from high school or five or more required post-secondary courses. 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.

**Direct Admission – High School and Direct Transfer, Post Secondary Institutions**

See "British Columbia and Yukon Applicants" on page 20.

**Internal Transfer**

Simon Fraser University students applying for School of Kinesiology admission must complete the following courses with a grade of C- or better:

- BISC 101-4 General Biology
- CHEM 121-4 General Chemistry and Laboratory I
- KIN 142-3 Introduction to Kinesiology

one of

- MATH 151-3 Calculus I
- MATH 154-3 Calculus I for the Biological Sciences

one of

- PHYS 101-3 General Physics I
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 125-3 Mechanics and Special Relativity
- PHYS 140-4 Studio Physics–Mechanics and Modern Physics

Applicants are selected based on an admission GPA calculated over these five required courses together with any of the following 9-10 courses taken.

- CHEM 122-2 General Chemistry II
- CHEM 281-4 Organic Chemistry and Laboratory I
- KIN 201-3 Biomechanics
- KIN 205-3 Introduction to Human Physiology
- KIN 207-3 Information Processing in Human Motor Systems
- MBB 221-3 Cellular Biology and Biochemistry

and (unless both PHYS 140 and 141 are taken) one of

- PHYS 130-2 General Physics Laboratory A
- PHYS 131-2 General Physics Laboratory B
- STAT 201-3 Statistics for the Life Sciences

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 semester approval, November 1 for spring semester approval, or March 1 for summer semester approval.

**Program Requirements**

Please read descriptions of required courses before enrolling in the major or honors program (see “Kinesiology KIN” on page 410). The following is a summary outline of the general degree requirements for a bachelor of science (kinesiology).

Kinesiology (lower division specified) – 12 credit hours

Faculty of Science (lower division specified) – 34 credit hours

Kinesiology (upper division specified) – 13 credit hours

Kinesiology (upper division unspecified) – 27 credit hours

Electives (lower division partly specified) – 6 credit hours

Electives (upper division unspecified) – 5 credit hours

Free electives (upper or lower division unspecified) – 23 credit hours

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:

- active health and rehabilitation kinesiology
- ergonomics/human factors
- 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.

- **Biochemistry**
  - MBB 221-3 Cellular Biology and Biochemistry
  - 3 credit hours

**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**

KIN 110-3 Human Nutrition: Current Issues
KIN 140-3 Contemporary Health Issues
KIN 143-3 Exercise Management
KIN 241-3 Sports Injuries: Prevention and Rehabilitation

- 12 credit hours

**Ergonomics and Human Factors Concentration**

KIN 180-3 Introduction to Ergonomics

- 3 credit hours

**Health And Physiological Sciences Concentration**

CHEM 126-2 General Chemistry Laboratory II
CHEM 282-2 Organic Chemistry II
CHEM 286-2 Organic Chemistry Laboratory II
MBB 222-3 Molecular Biology and Biochemistry

- 9 credit hours

**Breadth Requirements**

For students admitted September 2006 or later, a minimum of six credit hours must be selected from the Faculty of Arts and Social Sciences.

- 6 credit hours

For students admitted September 2006 or later, a minimum of six credit hours must be selected from the Faculty of Arts and Social Sciences.

- 6 credit hours

For students admitted September 2006 or later, a minimum of six credit hours must be selected from the Faculty of Arts and Social Sciences.
be writing-intensive (W). The quantitative (Q), science breadth (B-Sci) and undesigned 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 and one of
KIN 301-3 Biomechanics Laboratory²
KIN 407-3 Human Physiology Laboratory 19 credit hours
¹KIN 304 satisfies the University’s breadth requirements of three upper division credit hours in writing that is typical of the discipline
²KIN 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 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 Human Factors in Industrial Design
KIN 488-3 Ergonomics Laboratory and two of
KIN 433-3 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 496-3 Directed Studies I
KIN 498-3 Directed Studies II

“can be counted towards area of concentration if relevant to ergonomics or human factors. See the head of the area of concentration for permission to count any of these courses towards the area of concentration requirement. 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 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 254-3 Communications and Social Issues in Design
COGS 100-3 Introduction to Cognitive Science B-Hum, B-Soc, B-Sci
CRIM 101-3 Introduction to Criminology B-Soc
CRIM 355-3 The Forensic Sciences B-Soc
FPA 129-3 Fundamental Integration of Human Movement
GEOG 386-3 Geography, Health and Health Care
GEO 300-3 Introduction to Gerontology B-Soc
GEO 302-3 Health Promotion and Aging
GEO 404-3 Health and Illness in Later Life
GEO 420-3 Sociology of Aging
HIST 409-3 Disease and Society
HUM 227-3 Introduction to the Study of the Future B-Hum
PHIL 001-3 Critical Thinking
PHIL 100-3 Knowledge and Reality B-Hum Writing-Intensive
PHIL 110-3 Introduction to Logic and Reasoning
PHIL 120-3 Introduction to Moral Philosophy B-Hum Writing-Intensive

BISC 431-3 Molecular Biotechnology
MBB 308-3 Molecular Biology and Biochemistry Laboratory I
MBB 309-3 Molecular Biology and Biochemistry Laboratory II
MBB 322-3 Molecular Physiology
and seven of
KIN 310-3 Exercise/Work Physiology
KIN 336-3 Microscopic Anatomy
KIN 402-3 Mechanical Properties of Tissues
KIN 412-3 Molecular and Cellular Cardiology
KIN 415-3 Neural Control of Movement
KIN 416-3 Control of Limb Mechanics
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 498-3 Directed Study I
KIN 498-3 Directed Study II

*must be selected topics courses in physiology

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 45 credit hour total. For more information, see www.sfu.ca/ugcr.
ATE

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)
- acceptance into an accredited professional program in dentistry, medicine, chiropractic, or veterinary medicine.

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

Semester 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

Semester 2
- CHEM 122-2 General Chemistry II
- CHEM 281-4 Organic Chemistry I
- SA 101-4 Introduction to Anthropology B-Soc
- SA 118-3 Introduction to Sociology B-Soc
- SA 140-3 Anthropology of Medicine
- SA 150-4 Introduction to Sociology B-Soc
- SA 218-4 Illness, Culture and Society
- SA 318-3 Anthropology of Medicine

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
- a minimum CGPA of 3.00 on all relevant measures (cumulative grade point average, upper division grade point average, kinesiology grade point average, kinesiology upper division grade point average)

Note: honors students may count only one of either KIN 496 or 498 towards their 27 upper division elective kinesiology credit hours.

Physics and Physiology

Honors Program

See page 225 for requirements.

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, 207, 209 or 241 with a minimum grade of C- in each course
- submission of a program approval form to the undergraduate advisor.

Admission is competitive. An admission GPA is established each semester 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 towards the minor program from any other institution, including the Open Learning Agency. See “Residency Requirements” on page 108.

Students must complete one of

KIN 105-3 Fundamentals of Human Structure and Function
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

Students must also complete nine credit hours (three courses) of electives chosen from the following:

GERO 302-3 Health Promotion and Aging
GERO 407-3 Nutrition and Aging
KIN 143-3 Exercise Management
KIN 303-3 Kinesiopathology
KIN 312-3 Nutrition in Fitness and Sport
KIN 340-3 Active Health: Behavior and Promotion
KIN 375-3 Human Growth and Development
KIN 430-3 Human Energy Metabolism
KIN 431-3 Environmental Carcinogenesis

*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 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 20. 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 a maximum number of allowable transferable credit hours that count towards the certificate from any other institution, including the Open Learning Agency. See “Residency Requirements” on page 108.
Students must complete all of KIN 105-3 Fundamentals of Human Structure and Function*
KIN 110-3 Current Topics in Nutrition*
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 208-3 Introduction to Physiological Systems
and one of KIN 342-3 Active Health*
KIN 343-3 Active Health: Assessment and Promotion†

Students must also complete nine credit hours (three courses) of electives chosen from the following.
KIN 207-3 Information Processing Human Motor Systems
KIN 221-3 Special Topics in Kinesiology
KIN 241-3 Sports Injuries – Prevention and Rehabilitation
KIN 303-3 Kinanthropometry†
KIN 310-3 Exercise/Work Physiology*†
KIN 312-3 Nutrition for Fitness and Sport*
KIN 325-3 Basic Human Anatomy*
KIN 340-3 Active Health: Behavior and Promotion
KIN 367-3 Psychology of Motor Skill Acquisition*†
KIN 375-3 Physiological Basis of Growth and Development*
KIN 461-3 Physiological Aspects of Aging†

*courses available by distance education
†courses which have additional prerequisites

Students must have a minimum 2.00 GPA calculated on courses counting toward the certificate, and a current cardiopulmonary resuscitation (CPR) certificate at time of completion. 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.

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
and one of KIN 301-3 Biomechanics Laboratory
KIN 407-3 Human Physiology Laboratory

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 231.

TechOne Program

Simon Fraser University Surrey, Central City, 250–13450 102nd Avenue, Surrey, BC V3T 0A3, 604.268.7412 Tel, 604.268.7478 Fax, www.sfu.ca/techone

Program Director
E.J. Fee BA, MA, PhD (Br Coll)
Advisor
Ms. A. Stewart BA (S Fraser), 2566 Central City, 604.268.7444, 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 centred around the interplay of creative arts and information technology in an entrepreneurial world. TechOne specifically prepares students for second year studies in business, computing 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 a cohort program which means all students take their courses in smaller groups together with a set of other first year students. The program is taught in a blended learning format, where time on campus is spent in face-to-face classes and where on-line activities support traditional learning methods.

TechOne consists of 30 credit hours of required and elective courses taken over two semesters. Students entering the TechOne Program must commit to full time study. Access to all TechOne core courses is guaranteed.

First Semester Core

The first semester of TechOne consists of nine credit hours of core course work plus six credit hours to satisfy the TechOne mathematics and elective requirements.
CMPT 120-3 Introduction to Computing Science and Programming I
IAT 100-3 Systems of Media Representation
TECH 100-3 Fundamentals of Teamwork and Communication I

Second Semester Core

The second semester of TechOne consists of the following nine credit hours of core courses plus six credit hours of course work to satisfy the TechOne mathematics and elective requirements.
CMPT 125-3 Introduction to Computing Science and Programming II
IAT 101-3 New Media Images
TECH 101-3 Fundamentals of Teamwork and Communication II

TechOne Mathematics Requirements

Students must complete at least three credit hours of MATH or MACM courses chosen from an annually approved list.

TechOne Elective Requirements

In addition to core and mathematics requirements, students choose electives that will help them 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.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfil writing, quantitative and breadth requirements as part of their program. See "Writing, Quantitative and Breadth Requirements" on page 7 for more information.

After TechOne

Upon completion of TechOne, students may apply for admission to programs in business, computing science, interactive arts and technology, or other applied sciences disciplines. These programs may be subject to enrolment limitations, with competitive entry standards based on academic performance. Students who are unable to gain admission to these programs should consult the program advisor with respect to other options, such as the General Studies Program within the Faculty of Applied Sciences.
Faculty of Arts and Social Sciences

6168 Academic Quadrangle, 604.291.4414 Tel, 604.291.3033 Fax, www.sfu.ca/arts
Dean
J.T. Pierce BA (Tor), MA (Wat), PhD (Lond)
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, DPhil (Oxf)
T.A. Perry BA (Wabash), MA, PhD (Indiana)
Assistant Dean
V. Rose BA (S Fraser), MBA (Tor)
Advisors
Ms. C. de Lisser, BA (S Fraser), 6170 Academic Quadrangle, 604.291.5921
Ms. R. Lepp, 6170 Academic Quadrangle, 604.291.3090

Undergraduate Degrees Offered
Bachelor of Arts (Honors)
Bachelor of Arts (Joint Honors)
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of General Studies

Diplomas and Certificates Offered
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 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 Labor 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
Certificate in Women's Studies
Post Baccalaureate Diploma
Post Baccalaureate Diploma in Sustainable Community Development
Post Baccalaureate Diploma in Criminology
Post Baccalaureate Diploma in French and Education
Post Baccalaureate Diploma in Gerontology
Post Baccalaureate Diploma in Humanities
Post Baccalaureate Diploma in Social Policy Issues
Post Baccalaureate Diploma in Teaching English as a Second Language

Student Responsibility
It is the responsibility of each student to be aware of faculty regulations as stated in this Calendar. Departmental and faculty advisors and staff are available for advice and guidance. However, the ultimate responsibility for completeness and correctness of course selection, for compliance with and completion of program and degree requirements and for observance of regulations and deadlines rests with the student.

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.

In all programs leading to Faculty of Arts and Social Sciences bachelor's degrees must consult an advisor:
• prior to first registration at the University, and
• during that semester when they are taking their 45th credit hour, and
• during that semester 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 semester 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. A maximum of five will count toward all programs taken in the Faculty of Arts and Social Sciences at Simon Fraser University.

A maximum of nine credit hours taken through the Tri-Education Summer Institute may count toward a Faculty of Arts and Social Sciences degree or post baccalaureate program.

Co-operative Education Program in Liberal Arts
6046 Academic Quadrangle, 604.291.3041/5751/3776/5839 Tel
Co-ordinators
P. Johnston BA (S Fraser)
E. Lewis BA (S Fraser)
C. Rose 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 semesters on campus and in paid, study-related jobs.

Refer also to Archaeology, Criminology, Economics, English, First Nations, 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 register in LBRL 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 130), 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 231 for a list of Faculty of Arts and Social Sciences co-op advisors).

Students are encouraged to complete a Certificate in Liberal Arts in conjunction with the co-operative education program.

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 semester. College transfer students who participated in co-op programs elsewhere may be credited with the semesters 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.
Faculty of Arts and Social Sciences Breadth Requirements

Please note that Faculty of Arts and Social Sciences bachelor of arts and bachelor of fine arts students must complete 12 undesignated breadth credit hours rather than the normal University regulation of six undesignated breadth credit hours.

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 arts 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 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 breadth requirements (see below)

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 below)

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 the following:
- 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 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 departments as well as the approval of the degree advisor: Ms. M. Caufield, 6171 Academic Quadrangle, 604.291.5921.

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 toward this requirement must be taken at Simon Fraser University.

Honors Program

At least 132 credit hours which include the following.
- 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.

Honors Program

At least 132 credit hours which include the following.
- 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

At least 132 credit hours which include the following.
- 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 each 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 registering for the semester in which the 61st credit is taken, students must formally declare and be accepted into a major program or two extended minor programs 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 registers 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

6170 Academic Quadrangle, 604.291.5426 Tel, 604.291.3033 Fax

Advisors
Ms. C. de Lisser, BA (Fraser), 604.291.5921
Ms. R. Lepp, 604.291.3909

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 the goal.

Requirements

Students must complete 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 32) are rigorously applied in the Faculty of Arts and Social Sciences.

With the exception of EDUC 401, 402, 405 and 406, courses taken from any faculty may be used to satisfy the degree requirements, but admission to courses is

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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 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.

**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 may be credited toward the BGS degree, provided that the student also completes at least 30 of the required 45 credit hours of upper division credit in Simon Fraser University courses.

Even within these special transfer regulations, students must complete a total of 45 upper division credit hours. Any minor program within the BGS must include at least seven upper division credit hours earned at Simon Fraser University. See “Student Appeals” on page 37 for regulations.

**Integrated Studies Program**

Information is available from the director of integrated studies, Continuing Studies, at Simon Fraser University Vancouver. Integrated Studies programs within the bachelor of general studies degree are highly structured cohort based programs that meet the educational needs of specific student groups. Such programs integrate liberal studies with knowledge and skills associated with a particular field of practice, or with a background common to its students. Students may undertake this degree option only through special admission to an individual program. Integrated studies programs are designed and structured in consultation with external agencies or employers and may therefore have special locations, admission requirements and fee structures.

Because these programs may require and build upon varying levels of previous post-secondary education, related employment experience, and demonstrated intellectual maturity, the credit hours required to earn a degree may be less than the normal 120 credit hours. All such programs will require a minimum of 60 credit hours in designated Simon Fraser University courses offered within the program, to include at least 45 upper division credit hours.

Each integrated studies program will be governed by an academic steering committee. The curriculum, including both designated courses and total 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**

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 semesters at Simon Fraser University Surrey during which students can also become 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 131. The sets, with brief descriptions of the kinds of courses in each, are as follows.

**Course Sets**

**Applicable certificate courses are listed in 12 sets.** Each set includes courses from various University departments. For a certificate student to be acquainted with various fields of inquiry 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 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 10 courses must be distributed among the above sets as follows. (See course lists for applicable courses.)

two courses drawn from any TWO of the sets 1-3
two courses drawn from any TWO of the sets 4-6
two courses drawn from any TWO of the sets 7-9
two courses drawn from any TWO of the sets 10-12

The two additional courses required may be selected from any two sets.

Within these distribution requirements, students select any listed courses, and may tailor choices toward their academic needs and interests. Courses applied towards the Certificate in Liberal Arts may also be applied to any degree program, but may not be applied to another certificate or diploma program.

Course Lists
Courses within each set, published annually, are available at Student Services Academic Advising, the Dean of Arts and Social Sciences office, and at www.sfu.ca/arts/clacourse.htm. Lists include courses approved by senior 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 for the Faculty’s requirements 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 15 credit hour maximum is permitted. 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 toward certificate requirements.

Department of Archaeology
9635 Education Building, 604.291.3135 Tel, 604.291.5666 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)
P.M. Hobber BA (New Mexico), MA (Ariz)
R. Shutter, Jr, BA (Calif), PhD (Ariz)
Professors
D.V. Burley BA, MA (New Br), PhD (S Fraser)
J.C. Driver MA (Camb), PhD (Calg), Dean of Graduate Studies
K.R. Fladmark BA (Br Col), MA, PhD (Calg)
B.M.F. Galdikas BA (Br Col), MA, PhD (Calif)
B.D. Hayden BA (Colorado), MA, PhD (Tor)
D.E. Nelson BSc (Sask), PhD (McM)
M.F. Skinner BA (Alta), PhD (Camb)
Associate Professors
L.S. Bell BSc (Brad), MSc, PhD (Univ Coll, London)
A.C. D’Andrea BSc (To), MSc (Lond), PhD (Tor)
D. Lepofsky BA (Mich), MA (Br Col), PhD (Calif)
G.P. Nicholas BA (Franklin Pierce), MA (Missouri), PhD (Mass)
J.R. Welch AB (Hamilton), MA, PhD (Arizona)*
Assistant Professors
R.W. Jamieson BSc (Trent), MA (William and Mary), PhD (Calg)
D. Yang BSc (Lanzhou), MSc (Chin Acad Sc), PhD (McM)
E.C. Yellowhorn BA, BSc (Calg), MA (S Fraser), PhD (McG)**
Adjunct Professors
R.A. Lazenby BA, MA (S Fraser), PhD (McM)
A.D. 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. Huntley, Physics
R.W. Mathewes, Biological Sciences

Advisor
Ms G. Wild, 9633A Education Building, 604.291.4687
*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)
STAT 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 372-3 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 Zooarchaeology
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
ARCH 386-3 Archaeological Resource Management
ARCH 438-5 Geoarchaeology

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 registration.

Writing, Quantitative, and Breadth Requirements
Students completing degree programs must fulfil writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative and Breadth Requirements” page 7 for information. For the Faculty’s requirements, see “Faculty of Arts and Social Sciences Breadth Requirements” page 129.

Simon Fraser University 2006 • 2007 Calendar
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 studies, 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 128.

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 I, 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, 604.291.4687
Ms. K. Payne, Department of Sociology and Anthropology, 5056 Academic Quadrangle, 604.291.3726

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 Archaeology 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 archaeology 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 152 for program information.

Joint Major in Archaeology and Latin American Development Studies
See “Joint Major Programs” on page 168.

Co-operative Education Program
This program offers work experience in archaeology and physical anthropology and entails planned semesters 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 semester before the first work semester to participate. See “Co-operative Education” on page 231 regarding job competition, student employer responsibilities, student fees, pay rates and evaluation. During work semesters, co-op students are formally registered 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 semester(s) already taken pending evaluation and approval of the Simon Fraser University co-op program.

Asia-Canada Program

5115 Academic Quadrangle, 604.291.3689 Tel, 604.291.4504 Fax, www.sfu.ca/AsiaCanada

Director
T. Kawasaki LLB (Doshisha), MA (Tor), PhD (Prin)*

Advisory Committee
L. Clossey, History
S. Duguid, Humanities
J. Eyferth, History
K. Froschauer, Canadian Studies
A. Geiger, History
H. Leung, Women’s Studies
C. Han, Linguistics
M. Howard, Sociology and Anthropology
J. Matsumura, History
Z. McRobbie, Linguistics
P. Meyer, Political Science
R. Miki, English
B. Ng, Linguistics
N. Omae, Linguistics
J.W. Walls, David Lam Centre
Y. Wang, Linguistics
D. Yang, Archaeology
Y. Zhao, Communication

*joint appointment with humanities, political science

Advisor
Ms. C. Prisland, 5114 Academic Quadrangle, 604.291.4094, 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Extended Minor Program

Lower Division Requirements

Students must complete 18 credit hours including ASC 101-3 Introduction to Asia-Canada Studies I ASC 102-3 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 other 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 456-4 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 HIST 481-4 British India 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 III*


*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 semesters 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 100/101/200/210. 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 100/101/200/210.

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 255) HIST 256-3 The People’s Republic of China HIST 366-4 Social History of China Since 1800


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, 604.291.4293 Tel, 604.291.4786 Fax, www.sfu.ca/cns

Director

K. Froschauer BA, MA (Br Coll), PhD (Car)

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. Fladmark, P.M. Hobler, M.F. Skinner

Department of 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

R. Canac-Marquis, R. Davison, C. Guilbault, P. Wrenn, S. Steele

Department of Geography

N.K. Blomley, B.E. Bradshaw, A.M. Gill, M. Hayes, R. Hayter, P.M. Korosci, J.T. Pierce, M. Roseland

Department of History


Department of Humanities

I. Angus, K. Mezei

Department of Political Science


Department of Sociology and Anthropology


Department of Women’s Studies

M.G. Cohen

Faculty of Business Administration

G.A. Mauser, J.G. Richards, W.C. Wedley, M. Wexler
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.

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.

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 History, English, Geography, and the School of Communications.

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 338. 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 Faculty of Arts and Social Sciences.
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, 301, 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 339-3 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 286-3 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 388-3 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 359-4 Literature of British Columbia
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 469-4 The Canadian North and Middle North
Key courses for Geography: GEOG 162, 469; 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, 436; one of 424, 428; one of HIST 326, 327, 329

Latin American Development Studies Program
LAS 320-3 Canada and 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 Governments
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 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
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
BUEC 303-3 Business, Society and Ethics
BUEC 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 and Society
BUEC 453-5 Forecasting in Business and Economics
BUEC 485-3 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 494-3 Selected Topics in Business Administration
BUS 495-5 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 424-4 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 198-3 French for Reading Knowledge 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 304-3 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, 604.268.7127 Tel,
604.268.7128 Fax, www.sfu.ca/cognitive-science
Co-ordinator
F. Popowich, BSc, MSc (S Fraser), PhD (Edin)
604.291.4193, popowich@sfu.ca
Associate Professor
N. Hedberg BA, PhD (Minn)
Assistant Professor
M. Blair BS (Maryland), MA, PhD (Arizona State)
Advisor
Ms. S. Senaratne, 5605 Diamond Building,
604.268.7127, ssenarat@sfu.ca

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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Breadth Requirements

Students must fulfill the Faculty of Arts and Social Sciences breadth requirements (see “Writing, Quantitative, and Breadth Requirements” on page 130).

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
CMPT 125-3 Introduction to Computing Science and Programming II
Additionally students who choose intermediate level computing science, must complete
M ACM 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
Psychology
PSYC 100-3 Introduction to Psychology I
PSYC 102-3 Introduction to Psychology II

Intermediate Courses

(13-24 credit hours)
A student must fulfill the requirements listed below for at least three of the four disciplines.
Computing Science
CMPT 225-3 Data Structures and Programming
Linguistics
LING 221-3 Introduction to Phonology
LING 222-3 Introduction to Syntax
Philosophy
PHIL 210-4 Elementary Formal Logic I
Psychology
PSYC 210-4 Introduction to Research Methods in Psychology
PSYC 210-4 Introduction to Data Analysis in Psychology
PSYC 221-3 Introduction to Cognitive Psychology
PSYC 280-3 Introduction to Biological Psychology

Upper Division Requirements

(30-34 credit hours)
A student must choose COGS 300, plus fulfill the requirements listed below for the three disciplines selected previously at the intermediate level.

**Computing Science**
- one of CMPT 383-3 Comparative Programming Languages CMPT 384-3 Symbolic Computing
  - plus any two of CMPT 310-3 Artificial Intelligence Survey CMPT 411-3 Knowledge Representation CMPT 412-3 Computational Vision CMPT 413-3 Computational Linguistics CMPT 414-3 Model-based Computer Vision CMPT 417-3 Intelligent Systems CMPT 418-3 Computational cognitive Architecture CMPT 419-3 Topics in Artificial Intelligence

**Philosophy**
- any three of 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 PSYC 330-3 Attention PSYC 382-3 Cognitive Neuroscience

**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**
- MACM 300-3 Formal Languages and Automata with Applications
  - plus any two of the following courses which have not been taken previously CMPT 383-3 Comparative Programming Languages CMPT 384-3 Symbolic Computing CMPT 411-3 Knowledge Representation CMPT 412-3 Computational Vision CMPT 413-3 Computational Linguistics CMPT 414-3 Model-based Computer Vision CMPT 417-3 Intelligent Systems CMPT 418-3 Computational Cognitive Architecture CMPT 419-3 Topics in Artificial Intelligence

**Linguistics**
- any four of 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

**Co-operative Education**
This program, for qualified students who wish cognitive science practical experience, entails planned study and employment semesters. 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 semester(s) already taken. The applicability of such semesters depends on the evaluation of the Cognitive Science Program. The following four courses are completed during four work semesters.


Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op. The following series of four courses is completed at Simon Fraser University with a minimum CGPA of 2.75. 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 231.

**School for the Contemporary Arts**
Room 600 SCA, 604.291.3963 Tel, 604.291.5907 Fax, www.sfu.ca/sca, ca@sfu.ca

**Interim Director**
O. Underhill BMus (Vic, BC), MA (NY State)

**Professors Emeriti**
S.A. Aloï BA (Cornell), MA (Col) – dance
G. Strate BA, LLB (Alta) – dance

**Dena Wok University Professorship in Art and Culture Studies**
L. Marks BA (Swarthmore), MA, PhD (Roch)

**Faculty of Arts and Social Sciences – School for the Contemporary Arts**

**School for the Contemporary Arts**
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**Dena Wok University Professorship in Art and Culture Studies**
L. Marks BA (Swarthmore), MA, PhD (Roch)

**Computing Science**
- one of CMPT 383-3 Comparative Programming Languages CMPT 384-3 Symbolic Computing
  - plus any two of CMPT 310-3 Artificial Intelligence Survey CMPT 411-3 Knowledge Representation CMPT 412-3 Computational Vision CMPT 413-3 Computational Linguistics CMPT 414-3 Model-based Computer Vision CMPT 417-3 Intelligent Systems CMPT 418-3 Computational cognitive Architecture CMPT 419-3 Topics in Artificial Intelligence

**Philosophy**
- any three of 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 PSYC 330-3 Attention PSYC 382-3 Cognitive Neuroscience

**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**
- MACM 300-3 Formal Languages and Automata with Applications
  - plus any two of the following courses which have not been taken previously CMPT 383-3 Comparative Programming Languages CMPT 384-3 Symbolic Computing CMPT 411-3 Knowledge Representation CMPT 412-3 Computational Vision CMPT 413-3 Computational Linguistics CMPT 414-3 Model-based Computer Vision CMPT 417-3 Intelligent Systems CMPT 418-3 Computational Cognitive Architecture CMPT 419-3 Topics in Artificial Intelligence

**Linguistics**
- any four of 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

**Co-operative Education**
This program, for qualified students who wish cognitive science practical experience, entails planned study and employment semesters. 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 semester(s) already taken. The applicability of such semesters depends on the evaluation of the Cognitive Science Program. The following four courses are completed during four work semesters.


Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op. The following series of four courses is completed at Simon Fraser University with a minimum CGPA of 2.75. 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 231.

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**Dena Wok University Professorship in Art and Culture Studies**
L. Marks BA (Swarthmore), MA, PhD (Roch)
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 semester (fall and spring) sequence. Consequently, students seek fall semester (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 Placement
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 placement in the school’s programs. Advanced placement is generally given on an individual basis as a result of an audition or interview.

Programs Offered
The School for the Contemporary Arts offers the following programs.

- Major in Art and Culture Studies (BA)
- Major in Dance (BA)
- Major in Film (BA)
- Major in Music (BA)
- Major in Theatre (BA)
- Major in Visual Art (BA)
- 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 Fine and Video Studies
- Master of Fine Arts – page 280

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 semester and several are offered on a rotational basis, i.e. every third or fourth semester. 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.

- Art and Culture Studies: FPA 111, 210, 289, 310, 311, 312, 313, 314, 389, 411, 412, 414, 416
- Dance: FPA 120, 129, 226, 227, 229
- Film: FPA 136, 137, 236, 237, 335, 337, 436
- Music: FPA 104, 140, 243, 249, 341
- Theatre: FPA 150, 151, 170, 171, 257, 259, 270, 357
- Visual Art: FPA 160, 161, 167, 168

Special Topics Courses
The subject matter (and prerequisites) of special or selected topics courses vary by semester.

Prior Approval Prerequisite
Where a prerequisite is or includes ‘prior approval,’ approval must be obtained before registering 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.

- 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 theory/history. 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 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 in the Twentieth Century
FPA 167-3 Visual Art and Culture I
FPA 168-3 Visual Art and Culture II
FPA 227-3 History of Dance: Twentieth Century
FPA 229-3 Selected Topics in Dance I
FPA 236-3 Cinema in Canada
FPA 237-3 Selected Topics in Film and Video
FPA 244-3 Theory of Contemporary Music
FPA 249-3 Selected Topics in Music I
FPA 257-3 Context of Theatre I
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

*this course may only count in this category when it is offered as a theory/history course

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 150-3 Introduction to Acting I
FPA 151-3 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 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 262-3 Methods and Concepts: Drawing Practices
FPA 263-3 Methods and Concepts: Photographic Practices
FPA 265-3 Methods and Concepts: Photographic Practices
FPA 268-3 Methods and Concepts: Spatial Presentation
FPA 269-3 Methods and Concepts: Selected Topics
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 The Interdisciplinary Methods
FPA 311-4 Interdisciplinary Studies in the Arts
FPA 312-3 Intermediate Seminar in Art and Culture
FPA 315-4 Arts, Audience, Patronage, Institutions
FPA 314-3 Readings in the History of Art and Culture
FPA 335-3 Introduction to Film Theory
FPA 337-3 Intermediate Selected Topics in Film and Video Studies
FPA 341-3 World Music
FPA 344-3 Contemporary Music Analysis and Criticism
FPA 349-3 Selected Topics in Music I
FPA 357-3 Context of Theatre II
FPA 359-3 Selected Topics in Theatre II
FPA 366-3 Seminar in Visual Art I
FPA 367-3 Seminar in Visual Art II
FPA 369-3 Selected Topics in Visual Art II
FPA 389-3 Selected Topics in the Fine and Performing Arts II
FPA 411-3 Interdisciplinary Topics in the Contemporary Arts
FPA 412-4 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
FPA 436-3 Advanced Seminar in Film and Video Studies
FPA 457-3 Context of Theatre III

*this course may only count in this category when it is offered as a theory/history course

Upper Division Studio Courses
FPA 324-3 New Dance Composition
FPA 325-3 Special Project in Dance Composition
FPA 343-3 Gamelan II
FPA 349-3 Selected Topics in Music II
FPA 359-3 Selected Topics in Theatre II
FPA 369-3 Selected Topics in Visual Art II
FPA 375-3 Stage Design
FPA 389-3 Selected Topics in the Fine and Performing Arts II
FPA 390-3 Video Production II
FPA 425-5 Intensive Studies in Performance
FPA 426-3 Dance/Movement Analysis
FPA 443-3 Gamelan III
FPA 489-5 Interdisciplinary Project in Fine and Performing Arts

*this course may only count in this category when it is offered as a studio 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. Please note that Faculty of Arts and Social Sciences BA and BFA students must complete 12 credit hours of undesignated breadth rather than the university’s normal requirement of six undesignated breadth credit hours. For the Faculty’s requirements, see “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.
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 420-3 Advanced Seminar, Art and Culture*
- FPA 422-3 Dance Composition I
- FPA 424-3 Dance Composition II
- FPA 426-4 Dance Composition III
- FPA 428-3 Dance Composition IV
- FPA 429-3 Dance Composition V

Note: *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
- 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 Arts*
- FPA 412-4 Advanced Seminar in Art and Culture*
- FPA 413-4 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 toward this requirement.

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. 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
- one of
  - FPA 136-3 History and Aesthetics of Cinema I
  - FPA 137-3 History and Aesthetics of Cinema II
- plus
  - FPA 210-3 Arts, Theories, Contexts
  - plus three credit hours of lower division history, theory, or studio courses within the School for the Contemporary Arts.

Degree Requirements

To be awarded a Bachelor of Fine Arts, students must complete a minimum 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 80 credit hours
- film major 74 credit hours
- music major 76 credit hours
- theatre major (performance stream) 74 credit hours
- theatre major (production and design stream) 69 credit hours
- visual arts 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 125-1 Dance Composition I
- FPA 127-4 Dance Composition II
- 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: The 20th Century
- plus six additional credit hours in lower division FPA courses outside of dance.

Upper Division Requirements

A minimum of 40 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
- FPA 426-3 Dance/Movement Analysis
- plus 18 credit hours selected from the following
- FPA 322-3 Ballet I
- FPA 323-3 Ballet II
- FPA 325-3 Ballet III
- FPA 326-3 Ballet IV
- FPA 327-4 Repetory I
- FPA 328-4 Repetory II
- FPA 420-4 Contemporary Dance VII
- FPA 421-4 Contemporary Dance VIII
- FPA 423-6 Intensive Studies in Performance
- FPA 427-3 Ballet III
- FPA 428-3 Ballet IV
- FPA 429-3 Teaching and Movement Analysis

*other dance related courses may be substituted with permission of the school
plus one of FPA 311-4 Interdisciplinary Studies in the Arts FPA 313-5 Arts, Audience, Patronage, Institutions plus three additional credit hours in an upper division FPA course outside dance.

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 register in FPA 120.

Lower Division Requirements
A minimum of 31 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 127-3 History of Dance: Origins to the 20th Century FPA 227-3 History of Dance: The 20th Century plus one of FPA 111-3 Issues in the Fine and Performing Arts FPA 140-3 Music in the 20th Century 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 FPA 426-3 Dance/Movement Analysis 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

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 43 credit hours must be completed including the following. 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 with an upper division FPA course outside Film and another upper division FPA course may be substituted for one of the above.


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 plus two of FPA 136-3 The History and Aesthetics of Cinema I FPA 137-3 The History and Aesthetics of Cinema II FPA 236-3 Cinema in Canada 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 Directing and Acting for Film and Video
- FPA 390-3 Video Production II
- FPA 393-3 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 plus one of:
- FPA 310-4 Interdisciplinary Methods
- FPA 311-4 Interdisciplinary Studies in the Arts
- FPA 313-4 Readings in the History of Art and Culture
- FPA 411-4 Interdisciplinary Studies in the Arts

FPA 412-3 Advanced Topic in the History of Art and Culture
- FPA 416-3 Practices in Art and Culture
- FPA 414-3 Advanced Topic in the History of Art and Culture
- FPA 412-3 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

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.

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.

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 in the 20th Century
- 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 plus four of:
  - FPA 243-3 Gamelan I
  - FPA 245-3 Music Composition I
  - FPA 246-3 Music Composition II
  - FPA 247-3 Electroacoustic Music

FPA 249-3 Selected Topics in Music I plus one FPA lower division theory or history course outside music.

Upper Division Requirements
A minimum of 17 credit hours must be completed including at least three of:
- FPA 340-3 Contemporary Music Performance II
- FPA 341-3 World Music
- FPA 343-3 Gamelan II
- FPA 344-3 Contemporary Music Analysis and Criticism

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.

Music Extended Minor
Those who wish a BA general degree by completing two extended minors are directed to the music extended minor. A balanced introduction to music composition, theory, history and performance is supplied at the lower level. A less concentrated upper division allows experience in a particular area. This minor may be used for teaching in the schools.

Entry to specific courses required for the extended minor in music is by interview, usually scheduled for early spring and late summer. Contact the general office to make an appointment.

Lower Division Requirements
A minimum of 27 credit hours must be completed including all of:
- FPA 140-3 Music in the 20th Century
- 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 Music Composition I
- FPA 246-3 Music Composition II
- FPA 247-3 Electroacoustic Music
- FPA 249-3 Selected Topics in Music I

plus one FPA lower division theory or history course outside music.

Upper Division Requirements
A minimum of 17 credit hours must be completed including three of:
- FPA 340-3 Contemporary Music Performance II
- FPA 341-3 World Music
- FPA 343-3 Gamelan II
- FPA 344-3 Contemporary Music Analysis and Criticism

Plus one of:
- FPA 311-5 Interdisciplinary Studies in the Arts
- FPA 312-5 Arts, Audience, Patronage, Institutions

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.

Students who wish to enrol in the theatre performance major program normally take FPA 150, 151, and 170, and are advised to take other courses required for the major prior to auditioning for entry to the program.

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 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

plus one of

- FPA 171-3 Stage and Production Management
- FPA 270-3 Technical Theatre

plus two FPA studio courses other than theatre

#### Upper Division Requirements for the Performance Stream

A minimum of 33 credit hours must be completed including all of

- FPA 350-3 Acting III
- FPA 351-3 Acting IV
- FPA 352-2 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 and 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 170-3 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 one of

- FPA 120-3 Introduction to Contemporary Dance
- FPA 124-3 Dance Improvisation
- FPA 129-3 Fundamental Integration of Human Movement
- FPA 226-3 Dancing in Cyberspace

plus one of

- FPA 160-3 Introductory Studio in Visual Art I
- FPA 161-3 Introductory Studio in Visual Art II
- FPA 268-3 Methods and Concepts: Spatial Presentation
- FPA 269-3 Methods and Concepts: Selected Topics* outside of Theatre.

plus three credit hours from any lower division FPA theory or history course outside of Theatre.

plus three credit hours of 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 I
- FPA 373-3 Production Practicum IV
- FPA 372-3 Production Practicum V
- FPA 473-5 Production Practicum VI

plus one of

- FPA 325-3 Special Project in Dance Composition
- FPA 322-3 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

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 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 Artworks, Theories, Contexts
- FPA 260-3 Studio in Visual Art I
- FPA 261-3 Studio in Visual Art II

plus three 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: Photographic Practices
- FPA 268-3 Methods and Concepts: Spatial Presentation

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 15 credit hours must be completed including all 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 361-4 Interdisciplinary Studios in the Arts
FPA 313-5 Arts, Audience, Patronage, Institutions
plus additional upper division FPA courses to total at least 15 credit hours. An additional visual art course may be used to fulfill this requirement.

*may be taken more than once for credit under a different topic. Topics may change every semester 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 must be completed including all of:
FPA 361-4 Interdisciplinary Studies in the Arts
FPA 313-5 Arts, Audience, Patronage, Institutions
plus a minimum of 16 credit hours chosen from:
FPA 369-3 Methods and Concepts: Selected Topics* plus one of:
FPA 311-4 Interdisciplinary Studies in the Arts
FPA 313-5 Arts, Audience, Patronage, Institutions
plus additional upper division FPA courses to total at least 15 credit hours. An additional visual art course may be used to fulfill this requirement.

*may be taken more than once for credit under a different topic. Topics may change every semester 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, 168 in the first year, is determined by grades and portfolio assessment, usually scheduled at the end of the spring semester. 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 161-3 Introductory Studio in Visual Art II
FPA 163-3 Visual Art and Culture I
FPA 168-3 Visual Art and Culture II
FPA 210-3 Artworks, 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: Photographic Practices
FPA 268-3 Methods and Concepts: Spatial Presentation
FPA 269-3 Methods and Concepts: Selected Topics* plus six additional credit hours in upper division FPA courses outside visual art.

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 Studios 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 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 438-3 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 must complete 20 credit hours including all of:
SA 101-4 Introduction to Anthropology
SA 218-4 Illness, Culture and Society (SA)
SA 286-4 Aboriginal Peoples and British Columbia: Introduction
SA 293-4 Special Topics in Anthropology
SA 294-4 Special Topics in Anthropology and Sociology**
SA 295-4 Introduction to Social Research (SA)
SA 296-4 Aboriginal Peoples and British Columbia: Introduction (A)
SA 297-4 Special Topics in Anthropology (A)
SA 298-4 Special Topics in Anthropology and Sociology**
SA 299-4 Special Topics in Anthropology
SA 300-3 Women in Cross-Cultural Perspective
SA 301-4 Contemporary Ethnography
SA 302-4 Ethnography and Qualitative Methods (SA)
SA 303-4 Ethnic Conflict (SA)
SA 304-4 Tourism and Social Policy (SA)
SA 318-4 The Anthropology of Medicine
SA 319-4 Culture, Ethnicity and Aging (SA)
SA 320-4 Population and Society (SA)
SA 323-4 Symbol, Myth and Meaning (A)
SA 323-4 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 (A)**
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)
*high recommended
**applicable only when the topic is anthropology

Sociology Lower Division Requirements
Students complete 19 credit hours including all of
SA 150-1 Introduction to Sociology (S)
SA 250-1 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 Sociology of Childhood and Society (S)
SA 334-4 Sociology 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 (A)**
SA 463-4 Special Topics in Development Studies (SA)
SA 497-4 Directed Readings in Sociology (S)

Praxis Centre for Screenwriters
Suite 3120, 515 West Hastings Street, Vancouver,
BC, V6B 5K3. 604.268.7880 Fax. Tel. 604.268.7882 Fax,
www.praxiscfilm.com

Professor Emeriti
E.A. Fattah LLL (CAI), PhD (Montr), FRSc
K. Faith, MA (Calif), PhD (Tor)

Professors
N.T. Boyd BA (WOnt), LLB, LLM (Law Soc Upper Canada)
P.J. Brimmingham AB, JD (Col)
P.L. Brimmingham AB (Col), MA (Fordham), MSP, PhD (Florida State)
J. Brockman BA (Sask), MA (Alta), LLB (Calag), LLM (Brit Col)
B. Burnt BA (Qu), MA (Tor), PhD (Brit Col)
R.R. Corrado BA (Mich), MA, PhD (Northwestern)
R.M. Gordon BA (La Trobe), MA (S Fraser), PhD (Brit Col)
C.T. Griffiths BA, MA, PhD (Montana)
M.A. Jackson BA (Calag), MA, PhD (Tor)
J. Lowman BA (Sheff), MA (York, Can), PhD (Brit Col)
R.J. Menzies BA (York, Can), MA, PhD (Tor)
S.S. Palys BA, MA (Manit), PhD (Car)
S. Verdujin-Jones BA, MA (Camb), LLM, JD (Yale)

Associate Professors
G.S. Anderson BSc (Man), MPM, PhD (S Fraser)
E.O. Boyanowsky BA (WOnt), MS, PhD (Wis)
W.G. Glackman BA (Calif), MA, PhD (S Fraser)
J.A. Osborne LLB (Edin), MA (Tor), LLM (Br Col),
Associate Vice-President, Academic

Assistant Professors
G.J. Davies BA, MA (S Fraser), PhD (Rutgers)
E. Elliott BPE (Ott), MSW (Car), PhD (S Fraser)
B. Kinney BA (Br Col), MA, PhD (S Fraser)
A. Lusser BSc, MSc, PhD (Montr)
D. MacAlister LLB (Br Col), BA, MA (S Fraser),
LLM (Qu)

Lecturers
J. Faubert BA, MA (Guelph), PhD (S Fraser)
N.A. Madu BA (S Fraser), MA (Vic, BC)

Laboratory Instructor
M. Krvavic BA (S Fraser)

Adjunct Professors
J. Jenk FRSC (Canada), FCPsych, BA (SA), MB, ChB (Capetown)
D. Chappell BA, LLB (Tasmania), PhD (Camb)
K. Davidson, Inspector OIC “E” Division, Behavioural Sciences Group, ROMP
D. Gustafson BA (UVic), MA (Associated Menonite Seminaries, Indiana)

Principle Investigators
P. Monture BA (Wont), LLB (Qu), LLM (York, Can)
K. Pranis MA, MA (Northwestern)
C. Reasons BA (Central Wash), LLB (Br Col), MA (Ohio), PhD (Wash State)
K. Rossmo BA (Sask), MA, PhD (S Fraser)
S. Sharpe BA (N Dakota State), MA (N Colorado),
PhD (Denver)
B.D. Stuart BA (Bishop’s), LLB (Qu), LLM (York, Can)

Associate Members
S. Duguid, Humanities
C. Yverby, Continuing Studies
J. Whatley, Continuing Studies

Advisor
Ms. M. McIroy, 2644 Diamond Building,
604.291.3645, mcilroy@sfu.ca

Criminology offers courses leading to a bachelor of arts to students interested in a comprehensive, interdisciplinary approach to criminology.

The study of criminology attempts to unify all aspects of crime by an interdisciplinary and integrative approach.
The curriculum assists students to acquire an in-depth understanding of the complexities of crime, delinquent, and deviant behavior and of society’s reaction to crime and deviance. Students concurrently acquire a theoretical and practical knowledge of the criminal justice system and its components, and gain insight into the philosophy, sociology, and present state of criminal law.

A wide range of disciplines including psychology, sociology and anthropology, political science, business administration, economics, philosophy, computing science, and mathematics are integrated with criminology courses into a curriculum which covers the following areas.

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 criminal problems

Learning the Techniques
Research methods and techniques
Interventions
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 register 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 register in CRIM 499 and, therefore, cannot complete the program.

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.

Registration Priority
Registration 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 (recalculated 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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 ALower 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 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 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 BLower Division Requirements
Students are required to complete seven courses, including all of PSYC 100-3 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 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 Social Sciences*

*of the three statistics courses, STAT 203 is recommended for students in criminology.

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 at least one lower division course chosen from the following disciplines:

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)

General ElectivesLower 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 expressed 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 AUpper 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 358 for the listing of upper division criminology courses.

Group BUpper 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 registration restrictions, as shown in the Undergraduate Schedule of Classes and Examinations. If in doubt about your eligibility to register in a non-criminology course, contact the advisor in the appropriate department well in advance of any attempt to register.

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 semesters 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 semester with permission of the director of undergraduate programs. Students complete a minimum of 132 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 492.

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 register 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 and 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 of CRIM 135-3 Introduction to Canadian Law and Legal Institutions POL 151-3 The Administration of Justice and at least one of CRIM 210-3 Law, Youth and Young Offenders CRIM 230-3 Criminal Law CRIM 231-3 Introduction to the Judicial Process PHIL 120 is strongly recommended.

Upper Division Requirements
Students must complete one of CRIM 332-3 Sociology of Law CRIM 338-3 Philosophy of Law In addition, students must also complete at least nine credit hours from the following.


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 toward 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 register 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 register 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 register 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 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 100-3 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*
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.

Upper Division Requirements
Students must complete 21 credit hours in upper division psychology courses. No more than five 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 180.

Joint Major in Women's Studies and Criminology
See "Joint Major in Criminology and Women's Studies" on page 185 for requirements.

Certificate Programs
Advisor
Ms. M. McIlroy, 2644 Diamond Building, 604.291.3645
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
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)
• 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)

Post Baccalaureate Diploma Programs
Advisor
Ms. M. McIlroy, 2644 Diamond Building, 604.291.3645, mcilroy@sfu.ca
This program is for students who hold a bachelor's degree in a discipline other than criminal justice 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 semester admission)
April 30 (fall semester admission)
September 30 (spring semester admission)

Students must make separate application for admission to the University, in accordance with University deadlines for the appropriate semester.

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 enroll.

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 Psychologcial 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 446-4 Law in the Curriculum
EDUC 446-4 Law for the Classroom Teacher

Business, Economics and the Law
BUEC 391-3 Law in the Economic Scollte
BUEC 427-3 Industrial Organization: Law and Economics
BUS 393-3 Commercial Law

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 146). 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 semesters 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 ECON 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

and have a 2.75 minimum CGPA. Transfer students must have completed at least 15 credit hours at Simon Fraser University.

Please see “Co-operative Education” on page 231. Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator, who should be consulted at least one semester in advance.

Department of Economics

3602 Diamond Building, 604.291.3508 Tel, 604.291.5944 Fax, www.sfu.ca/economics

Chair (to be announced)

Professors Emeriti
L.A. Boland BS (Bradley), MS, PhD (III), FRSC
J.F. Chant BA (Br Coll), PhD (Duke)
P. Copes BA, MA (Br Coll), PhD (LSE), DMutSc (Royal Roads), DrPhilos (Tromsø), FANSFRF
J.W. Dean BSc (Car), MA, PhD (Harv)
H.G. Grubel BA (Rutgers), PhD (Yale)
R.A. Holmes BA, MA (Sask), PhD (Indiana)
M.H. Khan BSc, MA (Sindh), MSoocSc (Inst Soc Stud), PhD (Wageningen)
J.L. Knetsch, BS, MS (Michigan State), MPA, PhD (Harv)
R.G. Lipsy BA (Br Coll), MA (Tor), PhD (LSE), FRSCan
M.A. Lelowitz BS (NY), MS (Wis)
D.R. Maki BA (Minn), PhD (Iowa State)
J.M. Munro BCom (Br Coll), MBA, DBA (Indiana)
K. Strand BA (Wash State), MS, PhD (Wis)

Telus Endowed University Professor
R.G. Harris BA (Qu), PhD (Br Coll), FRSCan

Professors
D.W. Allen BA, MA (S Fraser), PhD (Wash)
J. Antovic BA (Sarajevo), MA, PhD (Chic)
D.J. DeVoretz BA, MA, PhD (Wis)
G. Dow BA (Amherst), MPP, PhD (Mich)
S.T. Easton AB (Oberlin), AM, PhD (Chic)
R. Genyajy BSc (METU), MA (Guelph), PhD (Houston)
R.G. Harris BA (Qu), PhD (Br Coll), FRSCan
R.A. Jones BSc, BA (Br Coll), MA, PhD (Brown)
P.E. Kennedy BA (Qu), PhD (Wis)
G.M. Myers BA (Qu), MA, PhD (McM)
N.D. Olevier BA (Col), MA (S Fraser), PhD (Br Coll)
C.G. Reed BA, MA, PhD (Wash)
A.J. Robson BSc (Well), PhD (MIT), Canada Research Chair
N. Schmidt Licence (Lausanne), MA (Car), PhD (Tor)
Z.A. Spindler BA (Wis), MA, PhD (Mich State)

Associate Professors
D. Andolfato BBA, MA (S Fraser), PhD (Wont)
J. Friesen BA (Br Coll), MA, PhD (Tor)
T.M. Heaps BSc (Br Coll), MA (S Fraser), PhD (Calif), PhD (Br Coll)
K. Kasa BSc (Calif), MA, PhD (Chic)
A. Kessler BA (Freiburg), MSc (Wis), PhD (Bonn)
Laverne BA, MA, PhD (Toulouse)
C. Lülfemann MSc (Bonn)
K. Pandakur BA, MA, PhD (Calif)
R.W. Schwinitz AB, PhD (Calif)*

Assistant Professors
P. Curry BA, MA, PhD (Wont)
D.S. Jacks BA, MA (Memphis), MSc (LSE), PhD (Calif)
A.K. Karayanalov BA (Sofia), BA (HvU), MA, PhD (Chic)
B. Kraith BA (Rice), MS, PhD (Wis)
F. Martin BA, MA (Tocoru diella), MA, PhD (Penn)
S. Mongrain BA, MA (Laval), PhD (Qu)
M. Rekkas BA (York, Can), MSc, MA, PhD (Tor)
S.D. Woodcock BA (S Fraser), MA (Br Coll), MA, PhD (Cornell)
J. Xu BA, MA (Zhejiang), MA, PhD (Br Coll)

Senior Lecturer
D.J. Cox BA (Wont), MA (Alta), PhD (Qu)

Instructors
G. Dunbar BA (Qu), MA (Vic, BC)
R.P. Estevas BA, MA (Porto)

Advisors
Ms. T. Sherwood, 3663 Diamond Building, 604.291.4571/3508, tsherwoo@sfu.ca

*joint appointment with business administration

The Department of Economics offers honors and major programs leading to the BA degree. The department also offers joint honors and joint major programs in co-operation with the Faculty of Business Administration and the Departments 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.

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 will be selected on the basis of CGPA and performance in required courses.

Applications for entry should be filed with the departmental advisor. Students provide the appropriate documentation. Those whose applications are not approved may appeal to the department’s undergraduate program chair. Students not accepted upon initial application may reapply.

Non-Majors Access to Courses
Lower Division
Access to lower division economics and BUEC 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 BUEC 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 BUEC courses.

Transfer Students
Students transferring to Simon Fraser University will be considered on the basis of their entrance CGPA (calculated for grades received in courses transferable to the University). Transfer students must be admitted to the University before they may apply for admission to the department’s major, honors or minor programs. Students who meet these requirements will be admitted to the program under a provisional status and will retain the provisional status until 15 credit hours have been completed at Simon Fraser University. To continue, the CGPA for these 15 credit hours must equal or exceed the CGPA entrance requirement for non-transfer students.

Exchange and Visiting Students
Exchange and visiting students must obtain approval from the Department of Economics prior to registering in upper division ECON/BUEC 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.

Prerequisites for any course may be waived for individual students by the department. In order for a course to be accepted as fulfilling a prerequisite, or for a required 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.

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, minor) students must have 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Major Program
Lower Division Requirements
Students must complete the following courses with at least a C- prior to admission to the major program.

BUEC 232-2 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 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
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 485)

*joint honors students who have successfully completed both MATH 232 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 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 485)

*joint honors students who have successfully completed both MATH 232 and 251 need not take ECON 331. However, at least 32 upper division credit hours in economics must still be taken.

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 485)

*joint honors students who have successfully completed both MATH 232 and 251 need not take ECON 331. However, at least 32 upper division credit hours in economics must still be taken.

Early Access to Upper Division Courses
Students normally cannot enter ECON upper division courses during the first 60 credit hours, but the following exceptions are permitted.

Students who earn a grade of A- or better in ECON 103 and 105 may register for ECON 301 and 305, and all courses for which they have satisfied the prerequisites, once they have completed 30 credit hours.

Students who earn a grade of A- or better in BUEC 232 or STAT 270 may register for BUEC 333 once they have completed 30 credit hours.

These upper division courses will count towards a 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 365 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 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 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
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
two 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 in Business Administration and Economics

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 within the requirements of a single concentration
• 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 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 129.

Co-operative Education
This program, for qualified students who wish to acquire practical experience in economics, entails planned semesters 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 30 must be completed at Simon Fraser University with a minimum CGPA of 2.75.
Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance. See “Co-operative Education” on page 231 for details.

Joint Major in Latin American Development Studies and Economics
See “Joint Major Programs” on page 168.

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 190.
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 129.

Co-operative Education
This program, for qualified students who wish to acquire practical experience in economics, entails planned semesters 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 30 must be completed at Simon Fraser University with a minimum CGPA of 2.75.
Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance. See “Co-operative Education” on page 231 for details.

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
two 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 in Business Administration and Economics

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 within the requirements of a single concentration
• 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 group requirements. For information, see Group Requirements.

Joint Major in Economics and Political Science
For requirements, see “Joint Major in Political Science and Economics” on page 176.

Joint Major in Geography and Economics – Environmental Specialty
For requirements, see “Joint Major in Geography and Economics – Environmental Specialty” on page 159.
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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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 203-3 Early Modern Literature
ENGL 205-3 19th Century Literatures in English (1660-1800)
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, or 199 may be replaced by any three unspecified 200 division transfer credit hours in English or in ENGL-Writing. Any one, but not more than one, of ENGL 206, 207, 210, 214 and 216 may be replaced by any unspecified 200 division transfer credit hours in English.
A student who enters the University with 18 lower division transfer credit hours 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, 103, 104, 105, or 199; one of ENGL 201 or 203 and one of ENGL 205 and 206.

Upper Division Requirements
An English major must obtain 32 credit hours in upper division English courses including two courses from Group 1 and one course from Group 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 a 2.00 grade point average in English courses.

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 (1660-1800)
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
and one of
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
ENGL 455-4 Topics in Canadian Literature

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 and criticism in ENGL 364 and, with the honors essay, concentrated independent research and writing on a topic of the student’s choice.
A 3.3 GPA in all Simon Fraser University English courses is required for acceptance and continuance in the program but does not in itself guarantee either.

Lower Division Requirements
Students proposing to enter honors English should take the same lower division English courses as English majors.

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, 400, and 404; one from within the grouping ENGL 310, 311, 313, 407, 410, and 416; one from within the grouping of ENGL 320, 322, 330, 420, and 427; and one from within the grouping of 354, 357, 359, and 455. ENGL 364, 465 and 496 are required and 16 credit hours must be at the 400 division.

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 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 19th Century Literature (1660-1800)
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 transfer credit hours in English or in ENGL – Writing. Any one, but not more than one, of ENGL 206, 207, 210, 214 and 216 may be replaced by any unspecified 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 Group 1 and one from within Group 2. Four credit hours must be at the 400 division. No courses from other departments may be substituted for the English courses which make up the minor. Students must maintain a 2.00 grade point average in English.

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 134 for program information.

Joint Major in English and French Literatures
See “Joint Major in English and French Literatures” on page 156 for program information.

Joint Major in English and Humanities
See “Joint Major in English and Humanities” on page 164 for program information.

Joint Major in English and Women’s Studies
See “Joint Major in English and Women’s Studies” on page 185 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 semesters 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.
Transfer students who have participated in co-operative education programs elsewhere may be credited with the semester(s) already taken. The applicability of such semesters depends on the evaluation.
Arrangements for the work semesters 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 231.

**First Nations Studies Program**

6188 Academic Quadrangle, 604.291.4774 Tel, 604.291.6989 Fax, www.sfu.ca/fns

First_nations@sfu.ca

604.291.4989 Fax, www.sfu.ca/fns, 6188 Academic Quadrangle, 604.291.5259

<table>
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<tr>
<th>Advisor</th>
<th>C. Papaianni, 6188 Academic Quadrangle, 604.291.5259</th>
</tr>
</thead>
</table>
| Advisory Committee | M. Boelscher Ignace, Sociology and Anthropology
D. Burley, Archaeology
D. Culhane, Sociology and Anthropology
D. Mellow, Linguistics
C. Papaianni, First Nations Studies
A. Ross, First Nations Studies
R. Russell, Mathematics
E.C. Yellowhorn, Archaeology, First Nations Studies* |
| Associate Professor | M. Boelscher Ignace MA (Georg August Universität), PhD (S Fraser), co-ordinator, SCS/SFU Program in Kamloops |
| Director | D.V. Burley BA, MA (New Br), PhD (S Fraser) |

*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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 125.

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-Native 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 Native 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 Native 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 History

(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 231-3 Introduction to a First Nations Language I

LING 232-3 Introduction to a First Nations Language II

LING 269-3 Language, Culture, and Society (when topic appropriate)

SA 286-4 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 Native Peoples and Public Policy

SA 387-4 Canadian Native Peoples

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 a native 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 native 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 in British Columbia and North America. They also gain insight into aboriginal 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

and the remaining 10 credit hours from the following.

Simon Fraser University 2006 - 2007 Calendar
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 to 1850
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
  - one of ARCH 301-3 Prehistoric and Indigenous Art
  - ARCH 336-3 Special Topics in Prehistoric and Indigenous Art
  - one of ARCH 349-5 Archaeological Conservation
  - ARCH 349-5 Management of Archaeological Collections
  - one of ARCH 360-5 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.

**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 either both of LING 231-3 Introduction to First Nations Language I and 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 National Language Mentoring I and LING 434-3 First National 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 Ancient Peoples and Places, and ARCH 201-3 Introduction to Archaeology.

**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
- CRIM 419-3 Indigenous Peoples, Crime and Criminal Justice
- FNST 227-3 Introduction to Canadian Studies†
- ENGL 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
- SOC 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 elective requirement.

**Recommended Courses**

In addition, the following courses are strongly recommended:
- SA 255-4 Introduction to Social Research
- and one of MATH 120-3 Introduction to Statistics†
- STAT 203-3 Introduction to Statistics for the social Sciences

**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 register.

**Required Courses**

Students must complete 12 credit hours including both of:
- FNST 301-3 Issues in Applied First Nations Studies Research
- 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 ENGL 447-3 Studies in Aboriginal Literature†, and 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.

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.

FNST 322 and 442 may be used to fulfill this group requirement only if the topics are deemed appropriate to at least one of the four group titles as shown below.

**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 322-3 Special Topics First Nations Studies
- FNST 402-3 The Discourse of Native Peoples**
- FNST 442-3 Directed Readings in First Nations Studies
- LING 323-3 Morphology†
- LING 331-3 Description and Analysis of a First Nations Language
- LING 332-3 Description and Analysis of a First Nations Language
- LING 335-3 Topics in First Nations Language I: Teaching and Learning an Aboriginal Language
- 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 Special Topics in Linguistics II: Topics in 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
- Group III Cultural and Natural Resource Management and Archaeology
- ANTH 306-3 Summer Field Training in Archaeology†
- ANTH 327-3 First Nations Natural Resource Management†
- ANTH 420-3/6 Archaeology of British Columbia†
- ARCH 439-5 Management of Archaeological Collections†
- ARCH 365-3 Ecological Archaeology† (or ANTH 3261)
- ARCH 386-3 Archaeological Resource Management†
- ARCH 435-6 Field Work Practicum† (or ANTH 411-3/6†)
- ARCH 572-5 Material Culture Analysis†
- ARCH 485-5 Lithic Technology†
- 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

**Group IV Comparative Study of Indigenous and Aboriginal Peoples**

- ANTH 401-3 Native Peoples of North America†
- ANTH 404-3 Peoples and Cultures of the North American Arctic†
- ARCH 360-6 Native Cultures of North America
- CRIM 311-3 Minorities and the Criminal Justice System
154 Faculty of Arts and Social Sciences – First Nations Studies Program

ENG 446-3 Studies in Commonwealth Post Colonial Literature: Indigenous Literatures of Canada, Australia and New Zealand
FNST 322-3 Special Topics in First Nations Studies
FNST 442-3 Directed Readings in First Nations Studies
SA 388-4 Comparative Studies of Minority Indigenous Peoples
SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

if the topic includes a significant component of First Nations/Aboriginal content
**students may count this for credit if the course(s) was not used as an upper division required course
†Thompson Rivers University course

ECTIVE COURSES

If, after meeting the upper division required courses and group requirements, the total number of upper division credit hours is less than 30, the student is required to take an additional three to eight credit hours of electives from any of the above Upper Division Group Requirement courses, or from additional courses in FNST, or with First Nations/Aboriginal studies content offered at either Simon Fraser University or TRU.

Certificate in Native Studies Research

This program provides a unique opportunity to explore the history and prehistory, culture, language and contemporary situation of Canadian native peoples, and to acquire basic research skills in Native issues. Particular emphasis is on the study of Native 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, and normally require five full time study semesters. It can be completed as a two year program, or be part of a BA degree program. The certificate is especially suitable for Native individuals who wish to gain proficiency in studying Native issues and to acquire social research skills to use in their communities and nations. It is also open to non-Native 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.

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 200-3 Special Topics in World Prehistory
ARCH 332-3 Special Topics in Archaeology I
ARCH 333-3 Special Topics in Archaeology II
ARCH 393-3 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 an Amerindian Language I
LING 232-3 Introduction to a First Nations Language II
LING 260-3 Language, Culture and Society
SA 100-4 Perspectives on Canadian Society
SA 201-4 Anthropology of Contemporary Life
SA 292-2 Special Topics in Sociology
SA 293-4 Special Topics in Anthropology
SA 386-4 Native Peoples and Public Policy
SA 387-4 Canadian Native Peoples
SA 388-4 Comparative Studies of Minority Indigenous Peoples
SA 396-4 Selected Regional Areas
WS 200-3 Women in Cross-Cultural Perspective
*when topic is appropriate

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 semester 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.

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 comparable content and level 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.

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 semesters. 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 18 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 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
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
ARCH 435-6 Fieldwork Practicum

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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 386-4 Native Peoples and Public Policy
SA 387-4 Canadian Native Peoples
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.

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
Chair
P.M. Wrenn BA, MA, PhD (Tor)
Professors Emeriti
M.C. Faucherney Léves, Dr3rdCy (Paris), Chev Palms Acad France, FRScan
G. Merler BA (Br Coll), MA, PhD (Laval)
J. Viswanathan Léves (Liège), MA (Ill), DésL (Liège)
Professors
R. Davison BA, MA, PhD (McG)
Y. Grisé BA, BEd (Montréal), Licence (Laval), Maîtrise, Dr3rdCycle (Paris), Chev Ord Péliaide, FRScan
Associate Professors
R. Canac-Marquis BA, MA (UQAM), PhD (Mass)
S. Steele BA, MA (Br Coll), PhD (Tor)
P.M. Wrenn BA, MA, PhD (Tor)
Assistant Professors
L. Frappier BA, MA, PhD (Montréal)
C. Guilbault BA, MA (Laval), PhD (Alta)
Senior Lecturer
C. Trépanier BA, MA (Laval)
Lecturers
L. Bruneau BA (Qu), MED (S Fraser)
C. Rasske BA, MA (Br Coll)
Advisor
Ms. R. Gould, 8108A Robert C. Brown Hall, 604.291.4505, gould@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.

Initial Course Selection
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 (except FREN 199 and 299).

French Language Placement Test
Students fitting into the following categories need not take the placement test but should register in the course indicated below.
• BC grade 12 French completed within the last three years who received a final grade of A: register 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: register in FREN 211
• BC grade 12 French completed within the last three years who do not meet either of the above two conditions: register in FREN 210
• Students who have completed grade 11 French within the last three years and have taken no more French since: register in FREN 122
• Fewer than three years of French taken in high school and no other French: register in FREN 121
• No French at all: register in FREN 120
• High school taken in a francophone educational system in a francophone country or province: register 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 222, and/or 229

These 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 or 222. Students may challenge lower level language courses only when registered in one of FREN 211 (or 212), 221, 222, and 301. Challenge of language courses lower than the one actually registered in may be initiated by filling out and signing a 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 33.

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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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.

Literacy Criticism
FREN 491-3 Readings in French Linguistics and/or

Extended Minor
Students must complete
FREN 301-3 Advanced French Composition I

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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 Culture
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 full partial fulfillment of these requirements.)

For further information about this program, its requirements and alternatives, see “Political Science Major, French Extended Minor Program Requirements” on page 175.

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 Grammar*
FREN 210-3 Intermediate French I
FREN 211-3 Intermediate French II
FREN 212-3 French for Immersion Program Students
FREN 215-3 Intermediate French Language: Oral Practice
FREN 217-3 French Pronunciation
FREN 221-3 French Writing I
FREN 222-3 French Writing II
FREN 225-3 Topics in French Language
FREN 299-3 Writing French II: Intermediate Composition*
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 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 Lexicology
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 230, 240. 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 475-3 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
In addition, two courses are available to students who do not wish to specialize in French. These are taught in English.

FREN 198-3 French for Reading Knowledge I
FREN 342-4 Literature in Translation from the Francophone World

Joint Major in English and French Literatures

The joint major is an interdepartmental program, usually within a BA, designed for students who are interested in exploring the many close relationships between English and French literatures.

Advisors
Ms. R. Gould, Department of French, 8108A Robert C. Brown Hall, 604.291.4505, gould@sfu.ca
Mrs. T. Wright BA (S Fraser), Department of History, 6026 Academic Quadrangle, 604.291.4429
Mrs. C. Sauro, Department of Political Science, 6025 Academic Quadrangle, 604.291.3446

This program concentrates on languages, literature, history and politics of France and French-speaking peoples of Canada and the world. It prepares for careers in teaching, journalism, archival work, civil and diplomatic services and is offered by the Departments of French, History and Political Science.
It is organized into three main themes: the French-speaking peoples of Canada, of France and Europe, and the French speaking peoples of the world. Students are not confined to any one theme; they may take any combination of courses within the program. The only requirement is that there must be some demonstrable French content in the course. The relevance of courses to the program is frequently obvious, e.g., courses dealing directly with France, French Canada, and the French language, but in cases where there is doubt as to sufficient French content in a course, the student should consult the steering committee representative in the appropriate department and review the Guidelines for Course Selection (contained in the information brochure relating to the joint major) which lists sample courses suitable for the program. The program is intended to be broad in nature: the emphasis is on the role played in the world by French language, literature, history and politics; hence the courses selected may represent a variety of interests and fields.

Courses offered by the Canadian studies program which might be of interest to many students.

### Lower Division Requirements
As prerequisites, the following are required for a total of 42 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 301</td>
<td>Advanced French I</td>
<td>3</td>
</tr>
<tr>
<td>FREN 302</td>
<td>Intermediate French II</td>
<td>3</td>
</tr>
<tr>
<td>FREN 303</td>
<td>Advanced French III</td>
<td>3</td>
</tr>
<tr>
<td>FREN 304</td>
<td>French Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

1. **Proficiency in one or more French language courses**: Students must successfully complete 15 credit hours, of which 12 hours must be at the intermediate level (FREN 210-3, 211-3, or 212-3).

2. **Upper Division Requirements**: The following are required for a total of 30 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 310</td>
<td>French Studies</td>
<td>3</td>
</tr>
<tr>
<td>FREN 360</td>
<td>French Composition</td>
<td>3</td>
</tr>
<tr>
<td>FREN 370</td>
<td>French Linguistics</td>
<td>4</td>
</tr>
<tr>
<td>FREN 380</td>
<td>French Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

3. **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.

4. **Joint Major in French and Humanities**: See "Department of Humanities" on page 164.

5. **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.

### Upper Division Requirements
The following are required for a total of 48 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 210</td>
<td>Intermediate French I</td>
<td>3</td>
</tr>
<tr>
<td>FREN 211</td>
<td>Intermediate French II</td>
<td>3</td>
</tr>
<tr>
<td>FREN 212</td>
<td>Intermediate French III</td>
<td>3</td>
</tr>
</tbody>
</table>

1. **Lower Division Requirements**: The following are required for a total of 42 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 301</td>
<td>Advanced French I</td>
<td>3</td>
</tr>
<tr>
<td>FREN 302</td>
<td>Intermediate French II</td>
<td>3</td>
</tr>
<tr>
<td>FREN 303</td>
<td>Advanced French III</td>
<td>3</td>
</tr>
<tr>
<td>FREN 304</td>
<td>French Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

2. **Proficiency in one or more French language courses**: Students must successfully complete 15 credit hours, of which 12 hours must be at the intermediate level (FREN 210-3, 211-3, or 212-3).

3. **Upper Division Requirements**: The following are required for a total of 30 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 310</td>
<td>French Studies</td>
<td>3</td>
</tr>
<tr>
<td>FREN 360</td>
<td>French Composition</td>
<td>3</td>
</tr>
<tr>
<td>FREN 370</td>
<td>French Linguistics</td>
<td>4</td>
</tr>
<tr>
<td>FREN 380</td>
<td>French Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

4. **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.

5. **Joint Major in French and Humanities**: See "Department of Humanities" on page 164.

### 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.

### 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.

1. **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.

2. **Joint Major in French and Humanities**: See "Department of Humanities" on page 164.

3. **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.

### 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 directly 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.

- 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.

### 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 441-4 Multicultural Education EDUC 450-4 French Curriculum Studies

The remaining credit hours may be chosen from EDUC 325-3 Assessment of 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).

Program Requirements
Students must complete 15 credit hours in Italian language instruction including ITAL 100-3,101-3, 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 film and/or video

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, 604.291.3321 Tel, 604.291.5841 Fax, www.sfu.ca/geography

Chair
E.J. Hickin BA, PhD (Syd), PGeo

Professors Emeriti
R.C. Brown BS, MS (Oregon State), PhD (Mich State)
C.B. Crampton BSc, PhD (Brist) A. MacPherson MA (Edin), FRMetS
T.K. Poiker PhD (Heidel) M.C. Roberts BSc (Lond), MA (Tor), PhD (Iowa)
PGeo

P.L. Wagner AB, MA, PhD (Calif)

J.W. Wilson BSc (Glás), MSc (MIT), MPP (N Carolina)

S.T. Wong AB (Augustana, Ill), AM (Yale), PhD (Chic)

Professors
N.K. Blomley BSc, PhD (Brist) A.M. Gill BA (Hull), MA (Alta), PhD (Manit)** R. Hayward BA (Newcastle, UK), MA (Alta), PhD (Wash)

EJ. Hickin BA, PhD (Syd), PGeo I. Hutchinson BA (Liv), MSc (McG), PhD (S Fraser)

J.T. Pierce BA (Tor), MA (Wat), PhD (Lond), Dean of Arts and Social Sciences A.C.B. Roberts BA (Tor), MA (Wat), PhD (York, Can)

Associate Professors
T.A. Brennand MA (Camb), PhD (Alta) J.A.C. Brohm BA (Car), MA, PhD (Calif)

R.A. Clapp BA (Yale), MA, PhD (Calif) S. Dragicevic BEng (Belgrade), MSc (Belgrade), PhD (Montr)

J. Hyndman BA (Alta), MA (Lanc), PhD (Br Col)

L.W. Lesack BSc (Manit), PhD (Calif)*

M.L. Roseland, BA MA (Wesleyan, Conn), PhD (Br Col)

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)

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. Marin BA (McGill), MSc (Guelph), PhD (Calif)

E. McCann MA (Glás), MA (Miami), Ohio, PhD (Kentucky)

N.C. Schuurman BSc (Nld), MA, PhD (Br Col)

J. Surgeon BA (Calif), MA (Wash), PhD (Yale)

I. Tromp-van Meerveld BSc, MSc (Vrije, Amsterdam),

PhD (Oregon State)

Senior Lecturer
O. Hertzman, BASc, MSc (Br Col), PhD (Wash)

I. Winton MA (Glás), MA (Br Col), PhD (Minn)

Associate Members
W.G. Gill, Vice-President, University Relations M.V. Hayes, Health Sciences

Adjunct Professor
O. Lian BSc, MSc (S Fraser), PhD (Wont)

Advisor
Ms. R. Multani, 7126 Robert C. Brown Hall, 604.291.4529

*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 "Physical Geography Program" on page 221.

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.
Students must complete the following core courses.

**Upper Division Requirements**
- REM 100-3 Global Change
- 24 credit hours
- EVSC 200-3 Introduction to Environmental Science
- and the following two trans-disciplinary core courses
  - GEOG 255-3 Geographical Information Science I
  - plus one of
    - GEOG 241-3 Social Geography
    - GEOG 215-3 Biogeography
    - GEOG 111-3 Physical Geography
    - GEOG 100-3 Human Geography

**Lower Division Requirements**
- Students must complete all of
  - GEOG 100-3 Human Geography
  - GEOG 213-3 Climatology I
  - GEOG 215-3 Biogeography
  - and one of
    - GEOG 213-3 Geomorphology I
    - GEOG 214-3 Climatology II
    - GEOG 221-3 Economic Geography
    - GEOG 111-3 Physical Geography

**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 221-3 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 200-3 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 World Resources
  - GEOG 377-4 Environmental History
  - GEOG 389-4 Human Ecology: Human Relations to Nature
  - REM 311-3 Applied Ecology and Sustainable Environments
  - REM 356-3 Institutional Arrangements for Sustainable Environmental Management
  - plus two of
    - GEOG 426-4 Industrial Change and Local Development
    - GEOG 428-4 World Forests
    - GEOG 432-4 Problems in Environmental History
    - GEOG 445-4 Resource Planning
    - GEOG 449-4 Environmental Processes and Urban Development
    - GEOG 468-4 Society and Environment in China
    - REM 445-3 Environmental Risk Assessment
    - REM 471-3 Forest Ecosystem Management
    - 18 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
    - 6-8 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 BS or BS (Honors) degrees under the Faculty of Applied Sciences. See “Geographic Information Science Program” on page 120 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 semester 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 “Student Appeals” on page 37.
  - Entry into the honors program requires the approval of the department and admission GPAs of 3.00.

**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 192 for requirements.

**Joint Major in Geography and Canadian Studies**
- See “Joint Major Programs” on page 134.

**Joint Major in Geography and Latin American Development Studies**
- See “Joint Major Programs” on page 168.

**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:
- ECON 301-3 Microeconomic Theory I: Competitive Behaviour
- ECON 305-3 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 110-3 Foundations of Economic Ideas
- ECON 208-3 History of Economic Thought
- ECON 250-3 Economic Development in the Pre-Industrial Period
- ECON 329-3 Introduction to Maxxi Economics
- ECON 353-4 Economic History of Canada
- ECON 355-4 Economic Development
- ECON 395-5 Comparative Economic Systems
- ECON 404-3 Honors Seminar in Methodology of the Social Sciences
- ECON 407-3 Seminar in Maxxi 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 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 325-4 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 211-3 Applied Ecology and Sustainable Environments
- REM 356-3 Institutional Arrangements for Sustainable Environmental Management

### Breadth Requirements

The following courses are recommended to fulfill the Faculty of Arts and Social Sciences breadth requirement:
- 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 448-3 The Communication of Science and the Transfer of Technology
- HIST 360-4 The History of Science: 1100-1725
- HUM 325-4 The Humanities and the Natural World
- PHIL 120-3 Introduction to Moral Philosophy
- PHIL 244-3 Introduction to the Philosophy of Natural and Social Science
- SA 371-4 The Environment and Society
- WS 204-3 Women, Science and Technology

### 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):
- all of GEOG 251-3 Quantitative Geography
- GEOG 253-3 Aerial Photographic Interpretation
- GEOG 255-3 Geographical Information Science I

plus three of:
- GEOG 351-4 Cartography and Visualization
- GEOG 352-4 Spatial Analysis
- GEOG 353-4 Remote Sensing
- GEOG 354-4 Geographic Information Science II

plus two of:
- GEOG 451-4 Spatial Modeling
- GEOG 453-4 Remote Sensing of Environment
- GEOG 454-4 Theoretical and Applied GIS

### Certificate in Urban Studies

This certificate studies the nature and functions of the contemporary city from an interdisciplinary perspective of geography, political science, sociology and anthropology. It is for undergraduates wishing a concentration in urban studies. Program completion is possible in one year but additional semesters may be required. It is suited to those contemplating careers in urban planning, governance or consulting.

#### Admission Requirements

Normal requirements for admission to Simon Fraser University apply. Prior to formal approval into the certificate program, students must complete two of GEOG 100-3 Human Geography
- POL 100-3 Introduction to Politics and Government

and at least one of these research methods courses:
- GEOG 389-4 Research Methods
- GEOG 403-4 Research Methods

#### Course Requirements

Successful completion of eight courses for a total of 29 or 30 credit hours including all of:
- GEOG 251-3 Quantitative Geography
- GEOG 261-3 Introduction to Urban Geography
- GEOG 262-3 Geography of Urban Development
- GEOG 263-3 Urban Planning and Policy
- HUM 340-4 Great Cities in Their Time
- POL 325-4 Urban and Local Governance in Canada
- POL 354-4 Comparative Metropolitan Governance
- SA 302-4 Global Problems and the Culture of Capitalism
- SA 362-4 Society and the Changing Global Division of Labour
- SA 364-4 Urban Communities and Cultures

and at least one of these four capstone seminars:
- GEOG 441-4 Cities, Space and Politics
- GEOG 449-4 Environmental Processes and Urban Development
- POL 454-4 Urban Public Policy Making
- POL 458-4 Selected Topics in Local and Urban Governance

### Co-operative Education

This program helps students acquire practical experience through planned semesters of study and employment in an area of the student's choice.

#### Requirements

To be admitted into co-op, students must have completed a minimum of 28 credit hours with a minimum cumulative GPA of 2.75. Prior to admission, students must complete the following:
- GEOG 100-3 Human Geography
- GEOG 111-3 Physical Geography
- GEOG 221-3 Economic Geography
- GEOG 241-3 Social Geography

### Department of Gerontology

2800 Simon Fraser University
Vancouver, BC V5A 1S6
Fax: 604.291.5067
Toll-free: 1.800.949.5666
Email: gero@sfu.ca
Phone: 604.291.5064
Website: www.sfu.ca/gerontology

Chair:
A.V. Wister HBA, MA, PhD (WOnT)
Professor Emeritus

G.M. Gutman (Br Col), MA (Alta), PhD (Br Col)
Professor
KIN 105-3 Fundaments of Human Structure and Function

KIN 142-3 Introduction to Kinesiology

PSYC 100-3 Introduction to Psychology I

PSYC 102-3 Introduction to Psychology II

SA 150-4 Introduction to Sociology (S)

STAT 203-3 Statistics for the Social Sciences

Approved minor students must complete GERO 300 plus 12 credit hours chosen from the following.

GERO 301-3 Research Methods in Gerontology

GERO 302-3 Health Promotion and Aging

GERO 400-4 Seminar in Applied Gerontology

GERO 401-3 Aging and the Built Environment

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 and Aging

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 420-4 Sociology of Aging

GERO 435-3 Adult Guardianship law

Additional courses from various departments are designated for inclusion in the minor. A list of these courses is available from the Gerontology Program. A maximum of six credit hours of designated courses may be applied towards 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 students who have completed a bachelor’s degree and 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 letters of reference attesting to the applicant’s personal qualities and characteristics, ability to complete a post baccalaureate program of studies and career potential and dedication to the field of gerontology. Students are advised to obtain an application package from the program office. The application package includes letter of reference forms, program information and a separate application to the Gerontology Diploma Program.

Program Requirements

Successful completion of 32 hours of approved course work, 20 of which are earned by completing the six required courses below. The remaining 12 hours are from the specified list of optional courses. A CGPA of 2.5 is required on courses applied toward the diploma. Students entering without experience 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 search prior to starting the practicum. Applications are also available at www.sfu.ca/gerontology
Lower Division Requirements

Students must obtain at least 18 credit hours in 100 and 200 division history courses, including at least six hours in 100 division, to enter the major program. 100 division courses introduce students to the main department course offerings — Canadian, American, Asian, and Latin American history, European history, and African and Middle Eastern history. 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 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 organized into three principal groups, providing ample opportunity to specialize in courses in any one of these groups, but for breadth of understanding, they must select courses from each group. A careful selection of lower division courses meets this requirement and lays the foundation for specialization in specific areas. For this reason, students are advised to take at least one course from each of the following groups of lower division courses.

Group 1 – Europe

HIST 105-3 Western Civilization from the Ancient World to the Reformation Era
HIST 106-3 The Making of Modern Europe
HIST 215-3 The Making of the British Isles
HIST 220-3 The Later Middle Ages
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 History of the Americas to 1763
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 215-3 The United States since 1877

Group 3 – Africa, Middle East, Asia

HIST 130-3 Modern World History
HIST 146-3 Africa in Recent History
HIST 151-3 The Modern Middle East
HIST 205-3 Premodern Japan
HIST 206-3 Modern Japan
HIST 231-3 The Origins of Modern Africa: Conquest, Resistance and Resurgence
HIST 249-3 Classical Islamic Civilization
HIST 252-3 Islamic India
HIST 254-3 China to 1800
HIST 255-3 China Since 1800
HIST 256-3 The People’s Republic of China

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.

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 hours (three courses) must be in 400 division work. Courses must be distributed within all three groups. Students take at least two courses from any two groups, and at least one from the remaining group. Consult one of the department’s advisors before beginning the program.

Group 1 – Europe

HIST 307-4 Selected Topics in Hellenic Studies
HIST 308-4 The Byzantine Empire
HIST 310-4 Women and the Family in Modern Europe
HIST 315-4 Politics and Society in England, 1500-1707
HIST 316-4 English Society since the Mid 18th Century
HIST 319-4 The Modern French Nation
HIST 320-4 European Reformation
HIST 321-4 State and Society in Early Modern Europe
HIST 331-4 Germany from the Reformation to 1815
HIST 332-4 Politics and Culture in Modern Germany
HIST 334-4 The Making of Imperial Russia
HIST 335-4 The Soviet Project
HIST 336-4 Absolutism and Enlightenment
HIST 337-4 The Balance of Power in Europe
HIST 338-4 World War II
HIST 339-4 The British Empire and Commonwealth
HIST 345-4 Selected Topics in European History
HIST 360-4 The History of Science: 1100-1725
HIST 361-4 The History of Science: The 18th Century to the Present
HIST 401-4 Problems in Modern German History
HIST 402-4 Renaissance Italy
HIST 403-4 The European Reformation
HIST 404-4 Protestants, Papists and Puritans: Culture and Belief in Early Modern England, 1500 – 1640
HIST 405-4 Authority and Community in Early Modern English Society, 1500 – 1700
HIST 407-4 Popular Culture in Great Britain and Europe
HIST 411-4 Class and Gender in Modern Europe
HIST 412-4 Marxism and the Writing of History
HIST 413-4 Britain and Europe in the Twentieth Century
HIST 414-4 The Impact of the Great War
HIST 415-4 Victorian Britain
HIST 416-4 The French Revolution
HIST 417-4 Modern French Problems in History
HIST 419-4 Problems in Modern Russian History
HIST 420-4 Russia as a Multiethnic Empire
HIST 421-4 Modern Greece, 1864-1925
HIST 422-4 Greece, 1935-1944: Occupation and Resistance
HIST 439-4 Catholicism in Early Modern Europe

Group 2 – The Americas

HIST 322-4 Atlantic Migration
HIST 324-4 Slavery in the Americas
HIST 325-4 History of Aboriginal Peoples of North America to 1850
HIST 326-4 History of Aboriginal Peoples of North America Since 1850
HIST 327-4 Canadian Labor and Working Class History
HIST 328-4 The Province of Quebec from Confederation
HIST 329-4 Canadian Family History
HIST 373-4 Conquest in North America, 1500-1900
HIST 374-4 Selected Topics in the History of the Americas
HIST 376-4 North American West
HIST 377-4 Environmental History
HIST 378-4 The United States in the World since 1865
HIST 382-4 Afro-American History, since 1865
HIST 384-4 North American Urban History
HIST 409-4 Disease and Society
HIST 424-4 Problems in the Cultural History of Canada
HIST 425-4 Gender and History
HIST 426-4 State Power and Social Regulation in North America
HIST 427-4 Problems in the History of Aboriginal Peoples
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
HIST 442-4 America’s Empires
HIST 446-4 American Revolution and the Making of the Constitution
HIST 450-4 Race, Expansion and War in the Early American Republic
HIST 453-4 The United States in Depression and War
HIST 454-4 The History of Sexuality
HIST 455-4 Race in the Americas
HIST 458-4 Problems in Latin American Regional History
HIST 459-4 Problems in the Political and Social History of Latin America

Group 3 – Africa, Middle East, Asia

HIST 343-4 Africa and the Slave Trade
HIST 344-4 East Africa
HIST 348-4 A History of 20th Century South Africa
HIST 350-4 The Ottoman Empire and Turkey
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 366-4 Social History in China since 1800
HIST 371-4 The Asia Pacific War in Modern Japanese History
HIST 456-4 The Later Ottoman Empire: State, Culture and Social Transformation, 1750-1923
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 469-4 Islamic Social and Intellectual History
HIST 471-4 Women in Modern Japanese History
HIST 472-4 Problems in World History
HIST 473-4 The Making of South African Society
HIST 479-4 Change, Conflict and Resistance in Twentieth-Century China
HIST 481-4 British India
HIST 483-4 The Struggle for Identity in Sub-Saharan Africa
These interdisciplinary courses below have some Canadian history content.
CNS 160-3 The Social Background of Canada
CNS 210-3 Foundations of Canadian Culture
CNS 391-3 Special Canadian Topics
CNS 490-3 Canadian Intellectual Tradition

**Concentration in Middle Eastern and Islamic History**
Students may qualify for this concentration by completing two of:
HIST 151-3 The Modern Middle East
HIST 249-3 Classical Islamic Civilization
HIST 252-3 Islamic India
plus four of:
HIST 350-4 The Ottoman Empire and Turkey
HIST 352-4 Religion and Politics in Modern Iran
HIST 355-4 The Arab Middle East in the Twentieth Century
HIST 465-4 The Palestinian-Israeli Conflict
HIST 467-4 Modern Egypt
HIST 469-4 Islamic Social and Intellectual History

**Concentration in British History**
Students may qualify for this concentration by completing:
HIST 215-3 The Making of the British Isles
plus one of:
HIST 315-4 Politics and Society in England, 1500-1707
HIST 316-4 English Society since the Mid 18th Century
and four of:
HIST 339-4 The British Empire and Commonwealth
HIST 404-4 Protestants, Papists and Puritans: Culture and Belief in Early Modern England, 1500 – 1640
HIST 405-4 Authority and Community in Early Modern English Society, 1500 – 1700
HIST 407-4 Popular Culture in Great Britain and Europe
HIST 413-4 Britain and Europe in the Twentieth Century
HIST 415-4 Victorian Britain
HIST 481-4 British India

**Honors Program**
In intensive, small seminars, students refine discussion skills, expository writing, and critical thought. No more than 30 students are enrolled at any one time. Honors applicants apply to the program supervisor at the end of the fourth year. Those admitted 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 three semesters in a fall/spring/fall/spring sequence. All other work must be completed within six semesters of program admission.
Honors students must complete the following:
HIST 300-4 Approaches to History
HIST 305-2 Honors Tutorial
HIST 400-4 Seminar in Historical Methods
HIST 498-8 Honors Essay
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 hours must be in history courses. For honors requirements, see page 129.

**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 16 credit hours with at least four credit hours in each division.
Courses with appropriate historical content in the Department of Women's Studies, Latin American Development Studies Program, and Humanities Program will be considered by history for designated credit toward this minor. Such courses must have prior approval from the departments' advisors.

**Labor Studies Minor**
Students must complete 24 credit hours comprised of:
- Nine lower division credit hours including LBST 101-3 Introducing Labor Studies
- 15 upper division credit hours including LBST 301-3 Labor Movements: Contemporary Issues and Images

The remaining required elective credit hours may be chosen from the following list:
- BUS 484-3 Workplace Industrial Relations
- BUS 488-3 Human Relations in Business
- BUEC 280-3 Introduction to Labor Economics
- BUEC 384-3 Industrial Relations
- BUEC 396-3 The Structure of Industry
- BUEC 485-3 Collective Bargaining
- CNS 280-3 Canadian Political Economy
- CMNS 454-4 Computer Mediated Work and Workplace Communication
- ECON 103-3 Principles of Microeconomics
- ECON 309-5 Introduction to Macroeconomics
- ECON 335-4 Economic History of Canada
- ECON 381-4 Labor Economics
- ECON 480-3 Seminar in the Economics of Labor
- GECG 426-4 Industrial Change and Local Development
- HIST 327-7 Canadian Labor and Working Class History
- HIST 412-4 Marxism and the Writing of History
- HIST 424-4 Problems in the Cultural History of Canada
- HIST 428-4 Problems in the Social and Economic History of Canada
- HIST 453-4 The United States in Depression and War
- KIN 381-3 Psychology of Work and Human Performance
- KIN 382-3 Physical Hazards in the Workplace
- LAS 318-4 Political Economy of Latin American Development
- POL 222-3 Introduction to Canadian Politics
- POL 223-3 Canadian Political Economy
- POL 327-4 Globalization and the Canadian State
- POL 343-4 Global Political Economy
- POL 356-4 The Political Economy of Labor
- POL 383-4 Political Economy of Latin America
- POL 423-4 BC Government and Politics
- SA 202-4 Post-Industrial Society
- SA 263-4 Peasants, Proletarians and the Global Economy
- SA 321-4 Social Movements
- SA 328-4 Political Economy of Latin American Development
- SA 340-4 Social Issues and Social Policy Analysis
- SA 362-4 The Global Division of Labor
- WS 308-4 Women and Work
- WS 310-4 Special Topics in Women's Studies*
- WS 314-4 Race, Class and Gender Relations
*when topic is appropriate

Students may take relevant Special Topics courses in place of those above with Labor Studies approval.

**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 advisor for the extended minor program.
The program requires 18 credit hours in 100 and 200 division courses and 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.

**Joint Major in History and Canadian Studies**
See “Joint Major Programs” on page 134.

**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 156.

**Joint Major in History and Humanities**
See “Joint Major in History and Humanities” on page 165.

**Joint Major in History and Latin American Development Studies**
See “Joint Major Programs” on page 168.

**Joint Major in History and Women’s Studies**
For program requirements, see “Joint Major in History and Women’s Studies” on page 186.

**Certificate in Hellenic Studies**
6219 Academic Quadrangle, 604.291.5886
The certificate, which requires a 24 credit hour minimum, is for those with Hellenic studies general interest and also for those interested in graduate Greek history. The latter are advised to take two language courses. Completion of prerequisites for upper division courses is the student’s responsibility. Special topics courses may be taken in place of those listed below with the advisor’s approval.

**Lower Division Requirements**
Students must complete three of:
- HUM 102-3 Classical Mythology
- HUM 151-3 Ancient Greek I
- HUM 152-3 Ancient Greek II
- HUM 201-3 Great Texts in Humanities I
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 which provide practical experience in social sciences, interpretive skills and complements a history degree.

Department of Humanities
5115 Academic Quadrangle, 604.291.3689 Tel, 604.291.4504 Fax, www.sfu.ca/humanities
Chair
S. Duguid BA (III), MA, PhD (S Fraser)
Professors Emeriti
A. Gomez-Moriana Lic, PhD (Salamanca), MA, PhD (Mün), FRSC
T.J. Kirschna BA (Roosevelt), MA, PhD (Chic)
J.W. Walls BA, MA, PhD (Indiana)
J. Zaslove BA (Case W Reserve), PhD (Wash)*
J.S. Woodworth Resident Scholar
R.J. Menzies BA (York, Can), MA, PhD (Tor)
Professors
I. Angus BA, MA (Wat), PhD (York, Can)
S. Duguid BA (III), MA, PhD (S Fraser)
P.E. Dutton BA (WOnt), MA, PhD (Tor), MSL, MSD (Pontif Inst Tor), FRSCan, Jack and Nancy Farley Endowed University Professor in History
K. Mezei BA (York, Can), MA (Can), PhD (Qu)
Associate Professors
L. Burton BA (Townson State), MSc (Johns H), MA, PhD (Columbia Teachers)
A.M. Feenberg-Dibon Licence d’Anglais, Diplome d’Etudes Superieures (Sorbonne), PhD (Calif)
T. Kawasaki LLB (Doshiba), MA (Tor), PhD (Prin)**
D.C. Mirhady BA, MA (Br Col), PhD (Rutgers)
E. Stebner BA, MA (Calg), PhD (Duke), J.S. Woodworth Chair
Assistant Professors
P. Crowe BA (Calg), MA, PhD (Br Col)
S. Gandesha BA (Br Col), MA, PhD (York)
E. O’Brien BA (Tor), MA, PhD (Brown)***
Adjunct Professors
P. Kingsley MLitt (Camb), PhD (Lond)
F.M. Wilkinson BA, MA (S Fraser), PhD (McG)
Associate Member
Y. Wosk, Continuing Studies
Senior Lecturer
T. Yu BA (HK), MA, PhD (Br Col)
Lecturer
C. Jones BA (Br Col), MA, PhD (McG)
“joint appointment with English
**joint appointment with political science
***joint appointment with history
Advisor
Ms. C. Prisland, 5114 Academic Quadrangle, 604.291.4094, prisland@sfu.ca
Humanities is the study of 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, study of the 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. Refer directly to their respective sections (see “Asia-Canada Program” on page 132 and also see “Liberal Studies Program” on page 289).

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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Major Program
Lower Division Requirements
Eighteen lower division credit hours including HUM 101-3 Introduction to the Humanities plus one of HIST 105-3 Western Civilization from the Ancient World to the Reformation Era HIST 106-3 Western Civilization from the Reformation Era to the 20th Century plus one of PHIL 150-3 History of Philosophy I PHIL 151-3 History of Philosophy II plus 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 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 plus 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 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 for the English major program. Please see “Lower Division Requirements” on page 151.

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.

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, 322, 400, 404, 407, 410 and 416; and one from within the grouping of ENGL 354, 357, 359 and 455. Four credit hours must be at the 400 division.

Humanities
Students must complete 22 credit hours in upper division humanities courses which must include HUM 495-2 Humanities Graduating Seminar
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 155.

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.

Upper Division Requirements
French
FREN 301-3 Advanced French Composition and one of FREN 360-4 Intermediate French Literature, 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 185.

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.

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 162.

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 330-4 The Humanities and Philosophy HUM 321-4 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 186.

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 semesters and employment. See the course descriptions for HUM 471, 472, 473, 474 (page 404). Work semester arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator who should be consulted at least one semester in advance. See “Co-operative Education” on page 231.

School for International Studies
2403 Simon Fraser University Vancouver, 604.268.7148 Tel, 604.268.7837 Fax, www.sfu.ca/internationals studies, intst@sfu.ca
Acting Director
S.T. Easton AB (Oberlin), AM, PhD (Chic)
Steering Committee
L. Cohen, Political Science
S. Easton, Economics
A. Gerolymatos, History
D. Gross, Public Policy
A. Hira, Political Science
M. Howard, Sociology and Anthropology
J. Hyndman, Geography
J. Matsumura, History
P. Warwick, Political Science
Advisor
Ms. J. Berube BA (S Fraser), 604.268.7148 Tel, 604.268.7837, jberubea@sfu.ca

The program is designed primarily for students with a background or interest in fields such as political science, history, economics, geography, sociology, and humanities, as well as other areas of study. Students can obtain specialization in international issues through a curriculum which provides integrated 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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 no less than 45 credit hours. Admission decisions will be made by the International Studies curriculum advisory committee. Interested students should contact the International Studies program advisor.

The International Studies program will consist of three primary components: prerequisite courses required for the thematic modules, thematic modules, and a foreign cultural component.
Major Program

Lower Division Requirements
Students complete 15 lower division credit hours including two of
INTS 220-3 Introduction to International Economics
POL 231-3 Introduction to Comparative Governments and Politics
POL 241-3 Introduction to International Politics
plus an additional nine lower division credit hours chosen from lower division module courses.

Upper Division Requirements
Students complete two of the three modules (32 credit hours) and fulfill foreign cultural component requirements (see "Foreign Cultural Component" on page 167).

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. Apply to the program director after completion of 18 lower division credit hours. Those admitted must maintain a minimum 3.0 grade point average.
For an honors degree, students complete
• 18 lower division credit hours
• 50 upper division credit hours including all requirements for the major
The additional lower division course (three credit hours) and the upper division courses (18 credit hours) can be from any of the modules or foreign cultural component (see “Foreign Cultural Component” on page 167).

Minor Program

Lower Division Requirements
Students complete 12 lower division credit hours including one of
INTS 220-3 Introduction to International Economics
POL 231-3 Introduction to Comparative Governments and Politics
POL 241-3 Introduction to International Politics
Additional lower division credit hours chosen from required courses or lower division module courses is also required.

Upper Division Requirements
Students complete 16 upper division credit hours including one of the three thematic modules.

International Studies Modules
Students must complete both upper and lower division requirements in each module to fulfill the module requirement.
No more than 40% of the required upper division credit hours can be fulfilled with courses from any one department.
Each module contains one required course, as identified below.
Note that POL 100 (or equivalent) is a prerequisite for the required courses in Modules 1 and 2, (POL 231 and POL 241). ECON 103 and 105 are the prerequisites for INTS 220, which is the required course for module 3.
Lower division courses in each module may be counted as electives to fulfill the lower division credit hour requirements for a degree. In addition, the program advisor may approve selected international field school or exchange courses (see below) for credit towards a module when the topic is appropriate.
It is the student's responsibility to ensure that all prerequisites are met for upper division requirements.

Module 1
International Security, Foreign Relations, and International Organizations

Lower Division
POL 241-3 Introduction to International Politics (required)
GEOG 102-3 World Problems in Geographic Perspective
SA 203-4 Violence in War and Peace

Upper Division
CRIM 413-3 Terrorism
CRIM 431-3 Comparative Criminal Justice Systems
HIST 357-4 The Balance of Power in Europe
HIST 414-4 The Impact of the Great War
POL 320-3 Canada-Latin America
POL 341-1 International Integration and Regional Association
POL 342-4 Relations Between Developed and Developing Nations
POL 344-4 Public International Law
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 417-4 Human Rights Theories
POL 422-4 Canadian International Security Relations
POL 441-4 Comparative Foreign Relations: Selected Political Systems
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 448-4 Selected Topics in International Relations
POL 449-4 Selected Topics in International Relations II

Module 2
Comparative World Politics: Culture, Identity and Political Processes

Lower Division
POL 231-3 Introduction to Comparative Government and Politics (Required for this module)
ASC 200-3 Introduction to Chinese Culture
ASC 201-3 Introduction to Japanese Culture and History
ASC 202-3 Studies in Asian Cultures
HIST 206-3 Modern Japan
HIST 209-3 Latin America: The National Period
POL 232-3 US Politics
SA 203-4 Violence in War and Peace
SA 275-4 Asian Societies
WS 200-3 Women in Cross-Cultural Perspective

Upper Division
ASC 300-3 Asians and North Americans in Public Discourse
GEOG 420-4 Comparative Cultural Geography
GEOG 446-4 Migration and Globalization
GEOG 497-5 International Field Study
HIST 335-4 The Soviet Project
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 420-4 Russia as a Multiethnic Empire
HIST 421-4 Modern Greece, 1864-1925
HIST 465-4 The Palestinian-Israeli Conflict

HIST 483-4 The Struggle for Identity in Sub-Saharan Africa
LAS 403-4 Special Topics: Latin American Economy and Society
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 483/SA 483-4 Political Economy of Latin American Development
POL 431-4 Comparative Western European Systems
POL 432-4 Comparative Communist and Post-Communist Political Systems
POL 435-4 Comparative Federal Systems
POL 436-4 Elections, Parties, and Governments in Comparative Perspective
POL 438-4 Selected Topics in Comparative Government and Politics
POL 439-4 Selected Topics in Comparative Government and Politics II
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 Special Topics: Latin American Economy and Society

Module 3
International Development, Economic, and Environmental Issues

Lower Division
INTS 220-3 Introduction to International Economics (required)
ECON 102-3 The World Economy
ECON 105-3 Principles of Macroeconomics
ECON 210-3 Money and Banking
ECON 260-3 Environmental Economics
GEOG 263-3 Selected Regions
REM 100-3 Global Change

Upper Division
ECON 342-3 International Trade
ECON 345-3 International Finance
ECON 355-4 Economic Development
ECON 395-5 Comparative Economic Systems
ECON 443-3 Seminar in International Trade
ECON 446-3 Seminar in International Finance
ECON 455-3 Seminar in Economic Development
GEOG 322-4 World Resources
GEOG 381-4 Political Geography
GEOG 382-4 Population Geography
GEOG 446-4 Migration and Globalization
GEOG 460-4 Selected Regions
INTS 320-4 Selected Problems in the International Economy
POL 327-4 Globalization and the Canadian State
POL 343-4 Global Political Economy
POL 345-4 The Nation-State and the Multinational Corporation
POL 414-4 Theories of Political Development
POL 433-4 Comparative Developing Systems
POL 442-4 The Politics of International Trade
POL 447-4 Theories of International Political Economy
POL 448-4 Selected Topics in International Relations I
POL 450-4 Globalization and Regional Politics in Latin America
SA 363-4 Processes of Development and Underdevelopment
SA 403-4 Special Topics: Latin American Economy and Society
SA 404-4 Andean History and Culture
SA 463-4 Special Topics in Development Studies
REM 311-3 Applied Ecology and Sustainable Environments
WS 309-4 Gender and International Development

Foreign Cultural Component

Language Proficiency
Students must have an acquaintance with a language other than English. Those who do not meet this requirement should take language courses either at the Language Training Institute (page 171) or the Department of French (page 155), or through a field school and foreign exchange program. Demonstrated proficiency in a second language will consist of the equivalent of four semesters of a Simon Fraser University language program.

Language Courses

Lower Division Courses
CHIN 100-3 Mandarin Chinese I
CHIN 101-3 Mandarin Chinese II
CHIN 151-3 Spoken Mandarin for Speakers of Other Chinese Dialects
CHIN 152-3 Spoken Mandarin for Speakers of Other Chinese Dialects II
CHIN 185-6 intensive Mandarin Chinese in the China Field School
CHIN 201-3 Mandarin Chinese III
CHIN 203-3 Mandarin Chinese IV
FREN 120-3 French for Beginners
FREN 121-3 Introductory French I
FREN 122-3 Introductory French II
FREN 198-3 French for Reading Knowledge I
FREN 199-3 Writing French I: Spelling and Grammar
FREN 210-3 Intermediate French I
FREN 211-3 Intermediate French II
FREN 215-3 Intermediate French: Oral Practice
FREN 217-3 French Pronunciation
FREN 221-3 French Writing I
FREN 222-3 French Writing II
FREN 225-3 Topics in French Language
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
GERM 102-4 Introductory German I
GERM 103-4 Introductory German II
GERM 104-3 German for Reading Knowledge I
GERM 201-3 Intermediate German I
GERM 202-3 Intermediate German II
GRK 104-3 Modern Greek for Reading Comprehension I
GRK 110-3 Modern Greek for Beginners I
GRK 160-3 Modern Greek for Beginners II
GRK 260-3 Modern Greek Intermediate II
ITAL 100-3 Introductory Italian I
ITAL 101-3 Introductory Italian II
ITAL 200-3 Intermediate Italian I
ITAL 201-3 Intermediate Italian II
ITAL 300-3 Advanced Italian: Language and Culture
JAPN 100-3 Introduction to Japanese
JAPN 101-3 Introduction to Japanese II
JAPN 200-3 Advanced Beginners' Japanese I
JAPN 201-3 Advanced Beginners' Japanese II
SPAN 102-3 Introductory Spanish I
SPAN 102-3 Introductory Spanish II
SPAN 201-3 Intermediate Spanish I
SPAN 202-3 Intermediate Spanish II

Upper Division Courses
FREN 300-3 Advanced French: Oral Practice
FREN 301-3 Advanced French Composition
FREN 304-3 Advanced French Grammar
FREN 307-3 French Vocabulary
FREN 320-3 Field School: Special Topics in French I
FREN 321-3 Field School: Special Topics in French II
FREN 322-3 Field School: Special Topics in French III
SPAN 303-3 Spanish Composition, Translation and Conversation
SPAN 304-3 Advanced Spanish Composition, Translation and Conversation
SPAN 305-3 Spanish for Business

Study Abroad Programs
This program requires students to include some study abroad as part of their undergraduate education, preferably in their third or fourth years of studies. Such study can be counted toward the elective requirements with the approval of the program, for example, through:

• field schools (current field school locations include Brazil, China, Czech Republic, Fiji, France, Ghana, Greece, India, Italy, Scotland, Thailand, Islands of Tonga, and Vietnam).
• enrollment in a foreign university program. Through the office of SFU International, Simon Fraser University has bilateral relations in 43 different countries and over 100 participating universities. With approval from the program advisor, students may take courses abroad to fulfill some module requirements towards the international studies major.
• short-term foreign visits. Opportunities for international conferences, colloquia and research are available through the International Studies program.
• co-op education internship. Students can gain work experience 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 the co-operative education program after satisfactory completion of 45 credit hours. The program consists of two separate work semesters 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.

- IFSC 200-299-1,2,3,4,5 International Field Studies
- ISFC 300-399-1,2,3,4,5 International Field Studies
- ISFC 400-499-1,2,3,4,5 International Field Studies
- INEX 200-299-1,2,3,4,5 International Exchange Studies
- INEX 300-399-1,2,3,4,5 International Exchange Studies
- INEX 400-499-1,2,3,4,5 International Exchange Studies
- LAS 402-5 Field Study
- LAS 404-3 Special Topics: Field School I
- LAS 405-3 Special Topics: Field School II

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 frequently 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.

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 181.

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 192.

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 162.

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 181.

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 semester.

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 focused 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 the Developed and Developing Nations  
POL 345-4 The National-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 semester 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 semester hours at Simon Fraser University.

See "Co-operative Education" on page 231 for details. Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator who should be consulted at least one semester in advance.

Department of Linguistics  
9201 Robert C. Brown Hall,  
604.291.4585 (option 1) Tel. 604.291.5659 Fax,  
www.sfu.ca/linguistics, tesl@sfu.ca for Teaching English as a Second Language enquiries  
Chair  
Z. McRobbie UDIpl, Dip, 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 Col), PhD (Calif)  
M. Munro BEd, MSc, PhD (Alta)  
F.J. Pelletier BS, MA (Nebraska), MSc, MSc (Alta), PhD (Calif), Canada Research Chair*  
Associate Professors  
N. Hedberg BA, PhD (Minn)  
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 Col)  
B. Ng BA (Int Christian, Japan), MA (Lond)  
N. Omne MA (Osaka), MPhil (Ewe)  
L. Zuccolo BA (Arg), MA (S Fraser)  
Lecturers  
C. Burgess BA, MA, PhD (S Fraser), LLB (Br Col)  
S. Fleming BA (Br Col), MA (S Fraser)  
I. Galloway BA, MA (Manc), MA (C’dia)  
S. Russell BA (Br Col), MA (S Fraser)  
Associated Faculty  
M. Boelscher Ignace, First Nations Studies, Sociology and Anthropology  
F. Popowich, Computing Science  
W. Turnbull, Psychology  
J.W. Walls, Humanities  
*joint appointment with Philosophy  
Advisors  
Ms. R. Parmar BA (S Fraser), 9200 Robert C. Brown Hall, 604.291.5739  
Ms. C. Papaianni, Certificate in First Nations Language Proficiency Advisor, 6189 Academic Quadrangle, 604.291.5595  
Ms. L. Hill, 6204 Academic Quadrangle, (for Language Training Institute and Certificate in Spanish Language Proficiency advising only), 604.291.4790  
The Department of Linguistics offers honors, major, extended minor and minor programs in linguistics and participates in the interdisciplinary programs of the cognitive science program. Program requirements for the honors, major, extended minor and minor programs are listed below. Students pursuing linguistics should seek advice early in their programs. General course descriptions are given in Undergraduate Courses.

Courses of Interest to Students Outside the Department  
These general interest courses give insight into language and linguistics, and have no prerequisites.  
LING 100-3 Communication and Language  
LING 110-3 The Wonder of Words  
LING 200-3 Introduction to the Description of English Grammar  
LING 220-3 Introduction to Linguistics  
LING 260-3 Language, Culture, and Society  
The following courses, although they carry prerequisites, may interest those with particular language specialities (when they focus on the language of their interest).  
LING 231-3 Introduction to a First Nations Language I  
LING 232-3 Introduction to a First Nations Language II  
LING 431-3 Language Structures I  
LING 432-3 Language Structures II  
The selected focus languages for these courses are shown in the Undergraduate Schedule of Classes and Examinations for the semester in which the course is offered.

Writing, Quantitative, and Breadth Requirements  
Students completing degree programs must fulfil 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Major Program  
Lower Division Requirements  
LING 130-3 Practical Phonetics  
LING 220-3 Introduction to Linguistics  
LING 221-3 Introduction to Phonology  
LING 223-3 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 323-3 Syntax  
plus any two of  
LING 323-3 Morphology  
LING 324-3 Semantics  
LING 330-3 Phonetics  
plus 15 additional credit hours in upper division linguistics courses.

Honors Program  
Lower Division Requirements  
LING 130-3 Practical Phonetics  
LING 220-3 Introduction to Linguistics  
LING 221-3 Introduction to Phonology  
LING 223-3 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 323-3 Syntax  
LING 490-3 Honors Essay  
plus any two of  
LING 323-3 Morphology  
LING 324-3 Semantics  
LING 330-3 Phonetics  
plus 32 additional hours chosen from upper division linguistics courses.

Minor Program  
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 linguistics courses.

Note: General course descriptions are given in the Undergraduate Courses section (page 169).  
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  
See “Joint Major in Computing Science and Linguistics” on page 114.
Joint Major in Linguistics and Anthropology

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

and one of

LING 241-3 Languages of the World
LING 260-3 Language, Culture and Society

plus six additional credit hours in 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 332-3 Description and Analysis of a First Nations Language II

LING 220-3 Introduction to 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 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 an Amerindian Language I
LING 232-3 Introduction to an Amerindian 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 semesters 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 courses 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 an applications committee 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 study may find that they are unable to register 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 as identified during the interview. Priority will be given to students who are registered 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
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

5 credit hours

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
EDUC 500-1 First Language Acquisition

Post Baccalaureate Diploma in Teaching English as a Second Language

The Department of Linguistics and the Faculty of Education jointly offer this program. Students should apply to the departmental advisor for admission to the diploma 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 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 linguistic 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

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 fulfill 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)

Note: Students who have already received credit for courses in this list through previous programs may not take them for further credit.

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 422-4 Learning Disabilities
EDUC 424-4 Learning Disabilities: Laboratory
EDUC 468-4 Cognition and Language in ESL
Instruction

Note: Those with credit for courses in this list through previous programs may not take them again for further credit. The 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 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 424-4 Learning Disabilities
EDUC 425-4 School Counselling for the Classroom Teacher
EDUC 441-4 Multicultural Education
LING 350-3 First Language Acquisition
LING 409-3 Sociolinguistics
SA 400-4 Canadian Ethnic Minorities

3-4 credit hours

Language Training Institute

6204 Academic Quadrangle, 604.291.4790 Tel, 604.291.4989 Fax, www.sfu.ca/lti

Interim Director
C. Burgess BA, MA, PhD (S Fraser), LLB (Br Col)

Associated Faculty
M. Escudero, Linguistics
T. Heit, Linguistics
B. Ng, Linguistics
N. Omae, Linguistics
L. Zuccolo, Linguistics

Advisor
Ms. L. Hill, 6204 Academic Quadrangle, 604.291.4790, lhill@sfu.ca

The Language Training Institute offers courses in Mandarin Chinese (CHIN), German (GERM), modern Greek (GRK), Japanese (JAPN), Spanish (SPAN), as well as other languages under the general language course designation (LANG).

LANG 100-149 (1-5) Introduction to a World Language
LANG 150-199 (1-5) Introduction to a World Language II
LANG 200-249 (1-5) Intermediate Language Study I
LANG 250-299 (1-5) Intermediate Language Study II

Students with language competence beyond the course level in which they are registered will be required to withdraw. Students who are unsure of their language level are responsible for having their proficiency assessed prior to course registration. Inquire at the Language Training Institute for the procedure to be followed.

Students who have completed, within the last two years, grade 12 in German, Japanese, Farsi or Spanish will not be admitted to Simon Fraser University GERM 102, 104, JAPN 100, LANG 118 or SPAN 102 for credit.

Students with high school Mandarin up to grade 12 will not be admitted to any 100 or 200 Chinese language course. Students who read and write Chinese but speak a dialect other than Mandarin should take CHIN 151 or 152.

Please refer to each language course outline for further details.

The department reserves the right to withdraw or to transfer a student to a higher level course should the language proficiency of the student prove greater than initially supposed.

Contact the Language Training Institute for information about current specific language offerings.

Other departments providing language instruction include the Department of French (FREN and ITAL) (page 155) and the Department of Linguistics (LING, for First Nations languages) (page 169).

Language Learning Centre

3020 Academic Quadrangle, 604.291.4698 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

Please see advisor for details about future Calendar changes (604.291.4790).

This program is for elementary and secondary school teachers and those 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 language knowledge for cultural, professional or employment purposes, or who desire official certification of Spanish proficiency. However, this is not for native Spanish speakers.

Requirements

Students must successfully complete all of:
LAS 100-3 Images of Latin America
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 303-3 Advanced Spanish Conversation and Composition
SPAN 304-3 Advanced Spanish Conversation and Composition
SPAN 305-3 Spanish for Business

plus one of:
LAS 140-3 Cultural Heritage of Latin America
LAS 200-3 Introduction to Latin American Issues
LAS 300-3 Latin American Literature

Notes:
Exemption of up to 12 credit hours from lower division Spanish language courses 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 six credit hours and/or
- successful completion of other Spanish courses at Simon Fraser University, excluding SPAN 300.

Students who gain or hope to gain exemption should consult the departmental advisor early in their program. Credit for this certificate may apply toward degree requirements under normal regulations but cannot be applied toward another Simon Fraser University certificate or diploma.
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 register in the courses to be challenged and in a Spanish language course for which the course(s) challenged is a prerequisite. A minimum grade of C in the higher course must be obtained to receive challenge credit.

Students who have completed the Spanish 12 program in Canadian high schools will not be admitted to Spanish 102. (Please contact Advisor about challenge credit hours.)

Co-operative Education
This program, for qualified students who wish to acquire practical experience in linguistics, entails planned study and work semesters. 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 15 credit hours before becoming eligible for co-op education 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 semester(s) already taken. The applicability of such semesters depends on the evaluation of the Department of Linguistics.

The following four courses are completed during four work semesters.
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 semester arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance (see “Co-operative Education” on page 231). 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, 604.291.3331/3332 Tel. 604.291.4947 Fax, www.math.sfu.ca

Advisors
Ms. J. Fabricius, K10512 Shrum Science Centre, 604.291.3332 (for registration advice)
Mrs. M. Finkboner BA (Occidental), MSc (S Fraser), K10511 Shrum Science Centre, 604.291.4849/3332

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 and in a mathematics faculty advisor.

For descriptions and prerequisites, see “Mathematics MATH” on page 418, “Mathematics and Computing Science MCM” on page 423 and “Management and Systems Science MSSC” on page 417.

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 215 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 requirements and general University cumulative GPA and credit hour requirements. See “Mathematics MATH” on page 419 for entry level requirements and department workshops.

Prerequisite Grade Requirement
To register 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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 and 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 223-3 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 in 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 215 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 one of the department’s advisors.

Department of Philosophy
4604 Diamond Building, 604.291.3343 Tel, 604.291.4443 Fax, www.sfu.ca/philosophy

Chair
(to be announced)

Professors Emeriti
R.D. Bradley BA, MA (Auck), PhD (ANU)
S. Davis BA (Roch), MA, PhD (Ill)
L. Resnick, BA, PhD (Cornell)
N.M. Swartz BA (Harv), MA, PhD (Indiana)

Professors
R.E. Jennings BA, MA (Qu), PhD (Lond)
F.J. Pelletier BS, MA (Nebraska), MSc, MSc (Alta),
PhD (Calif), Canada Research Chair**
D. Zimmerman, BA, MA, PhD (Mich)

Associate Professors
K. Akins BA (Mant), PhD (Mich)
S. Black BA (C’dia), PhD (Camb)
M. Hahn BA (S Fraser), MA (Br Col), PhD (Calif)
P. Hanson BA (Calg), MA, PhD (Phin)
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 (Albion), 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, 604.291.4852

*joint appointment with computing science
**joint appointment with linguistics

General Information
All 100 division courses (and PHIL 001) improve skills in critical thinking, logical analysis and clarity of expression, and teach some of the most important philosophical problems, perspectives and methods. All 100 division courses have no prerequisites, and may 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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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
PHIL 321-3 Moral Issues and Theories
PHIL 322-3 History of Ethics*
PHIL 421-4 Ethical Theories

and at least one of
PHIL 302-3 Topics in Epistemology and Metaphysics
PHIL 341-3 Philosophy of Science
PHIL 343-3 Philosophy of Mind
PHIL 344-3 Philosophy of Language I
and at least two of
PHIL 322-3 History of Ethics
PHIL 350-3 Ancient Philosophy
PHIL 352-3 17th Century Philosophy
PHIL 355-3 18th Century Philosophy
PHIL 357-3 Topics in the History of Philosophy
PHIL 451-4 Kant

*unless counted as a history stream requirement

Honors Program
This program is for students capable of self-direction who wish to pursue advanced work in philosophy with the benefit of individual attention.

Course Requirements
Entering students must first complete 60 credit hours including 12 credit hours of upper division philosophy, and must fulfill lower division philosophy major requirements as listed above. Normally a 3.5 GPA or higher in upper division philosophy courses is expected for entrance and continuation but does not by itself guarantee either. Students proposing honors must submit an application (available in the department office), and consult the advisor.

Students pursuing honors must complete:
- the philosophy major program requirements
- at least 50 upper division philosophy upper credit hours
- and two honors tutorials in the last semester, or last two semesters, of the program

Tutorials offer sufficient time to examine in-depth several philosophical topics in a general area such as ethics, metaphysics, philosophy of mind, etc. The honors candidate must achieve a grade of B or higher in each honors tutorial to receive the honors degree.

Minor Program

Course Requirements
Students must complete at least 15 upper division credit hours. Suggested lower division courses include PHIL 100, 120, 150 or 151, and 201 or 203. These courses provide a good basis for upper division courses of the student’s choice. Other combinations are possible, and the student with particular upper division courses in mind should confirm prerequisites.

With the undergraduate advisor, a student may design a minor program with an emphasis that complements a special interest. For example, programs may be designed for students with an interest in law, language, natural or social science, history of ideas, social theory, value theory or logic.

Extended Minor Program
This program consists of the lower division requirements for a major and the upper division requirements for a minor. Program approval by the advisor is required.

Joint Major in Philosophy and Humanities
See page 165 for program 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 136 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 355-3 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 344-3 Philosophy of Language I
PHIL 444-4 Philosophy of Language II
Department of Political Science

8067 Academic Quadrangle, 604.291.4293 Tel, 604.291.4786 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. McWherter QC, LL.M, SJ.D (Yale)
F.Q. Quo BA (Natl Taiwan), MA (Oregon), PhD (S Illinois)
M. Robin BA (Manit), MA, PhD (Tor)
A.H. Somjee MA (Agra), PhD (Lond)

Professors
L.J. Cohen BA, MA (Ill), PhD (Col)
M.A. Cowell BA (Br Col), MA, PhD (Yale)
L.J. Erikson BA, PhD (Alta)
M. Griffin Cohen BA (Iowa Wesleyan), MA (NY), PhD (York, Can)*
M. Howlett BSocSci (Ott), MA (Br Col), PhD (Qu)
D. Laycock BA (Alta), MA, PhD (Tor)
S. McBride BSoc (Lond), MA, PhD (McM)
P. Meyer BA (Wellesley), MA, PhD (Col)
A. Moens BA (Leith), MA (McM), PhD (Br Col)
A. Perl Ba (Harv), MA, PhD (Tor)**
D.A. Ross BA, MA, PhD (Tor)
P.J. Smith BA, MA (McM), PhD (Lond)
H.M. Stevenson BA (Wtwe), MA (Mich), PhD (Northwestern), President of the University
P.V. Warwick BA (McM), MA, PhD (Chic)

Associate Professors
J. Busumtwi-Sam BA (Ghana), MA (Brock), PhD (Tor)
L. Dobuzinskis LScEcon (Paris), PhD (York, Can)*
O. Hankivsky BA (Tor), MA, PhD (Wom)
A. Heard BA (Dal), MSc (Lond), PhD (Tor)
A. Hira BA (Georgetown), MA (Washington), PhD (Claremont)
T. Kawasaki LLB (Doshisha), MA (Tor), PhD (Prin)**
S.J. MacLean BSc, MA, PhD (Dal)

Assistant Professors
A.J. Ayers BA (Birm), MSc (Reading), PhD (Sus)
K. Chenard BA (Birm), MA (Sorbonne), PhD (Laval/Sorbonne)
G. Fuji Johnson BA (S Fraser), MA (LSE), PhD (Tor)

Advisor
Ms. L. Kool, 6072 Academic Quadrangle, 604.291.3588

*joint appointment with women’s studies
**joint appointment with Asia-Canada, humanities
***joint appointment with urban 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 128.

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
POL 313-4 Political Ideologies

POL 314-4 Theory and Explanation in Political Science
POL 315-4 Quantitative Methods in Political Science**
POL 319-4 Selected Topics in Political Theory
POL 411-4 Normative Political Theory
POL 414-4 Theories of Political Development
POL 415-4 The Liberal Tradition
POL 416-4 Feminist Social and Political Thought
POL 417-4 Human Rights Theories
POL 418-4 Selected Topics in Political Theory I*
POL 419-4 Selected Topics in Political Theory II*
*these courses may require special prerequisites
**SA 355 may substitute for POL 315

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 324-7 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 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 439-4 Selected Topics in Comparative Government and Politics I*

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

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 Governance 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 Government

*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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

Major Program

Lower Division Requirements

Students must complete

POL 100-3 Introduction to Politics and Government

and one of

POL 201-3 Research Methods in Political Science

STAT 203-3 Introduction to Statistics for the Social Sciences

and

POL 210-3 Introduction to Political Philosophy

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 complete 32 upper division POL credit hours. Eight of these 32 credit hours must be at the 400 division. This allows a student to concentrate course work in one field of study while attaining a broader understanding of the political science discipline.

**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 semester prior to honor program entrance.

**Lower Division Requirements**

Students must complete

- POL 100-3 Introduction to Politics and Government
- POL 210-3 Introduction to Political Philosophy
- and one of
- 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.

**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**

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 (minimum of 75%) 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.

The French Language Cohort Program advisor can be reached at 604.268.6858. Offices are located in room 198-A Cornerstone Building.

Non-French Cohort Program students who wish to register in French Cohort Program courses taught in French must contact the French Program advisor.

**Admission Requirements**

The cohort program (see below) begins in the fall semester only, and is for those who have adequate competency in French, as determined by the French language placement tests. As it is a cohort program in which students will move together through a significant proportion 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, one semester at a Francophone university is included in this program.

In addition, one semester 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 credit hours of political science, as follows, four of which will be taught in French.

- POL 100-3 Introduction to Politics and Government (cs)
- 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.

**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 155).

**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 102-3 Canada Since Confederation (cs)
- 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.
Alternate Program Path
Students may complete the first three years of the full cohort program which leads to a major in political science with an extended minor in French. They may, however, opt in the fourth year to pursue a major in French or another major program that may qualify the student to enter the Professional Development Program. Students are urged to check with the cohort program advisor if they wish to exercise this option.

Minor Program

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 156 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 134.

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

Joint Major in Political Science and Latin American Development Studies
Students must complete the following with a grade of at least C- prior to joint major program admission. BUEC 232-3 Elementary Economic and Business Statistics I
ECON 103-3 Principles of Macroeconomics
ECON 105-3 Principles of Microeconomics
MATH 110-3 Introductory mathematics for the Social and Management Sciences
MATH 157-3 Calculus for the Social Sciences (or equivalent)
plus
• two 200 division ECON or BUEC courses in addition to BUEC 232
• one 000, 100 or 200 ENGL or PHIL course
• one 100 or 200 division HIST or POL course (fulfilled by political science requirements listed above)
• one 100 or 200 division SA or PSYCY course
• one 100 or 200 division BISC, CHEM or PHYS course

Upper Division Requirements

Joint Major in Political Science and Women’s Studies
This program explores the political dimensions and context of women’s experience, and the impact of women and feminist theory on the practice and study of politics. Consult advisors in both departments.

Lower Division Requirements

Joint Major in Political Science and Latin American Development Studies
Political Science
POL 100-3 Introduction to Politics and Government
plus one of BUEC 232-3 Elementary Economic and Business Statistics I
CRIM 220-3 Research Methods in Criminology
PSYC 201-4 Research Methods in Psychology
SA 255-4 Introduction to Social Research

Women’s Studies
Students must complete 15 upper 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

Upper Division Requirements

Political Science
Students must complete 24 upper division credit hours from at least three of the five fields of study (field A, B, C, D or E) for a total of 21 credit hours.

*recommended

Economics
Students must complete the following with a grade of at least C- prior to joint major program admission. BUEC 232-3 Elementary Economic and Business Statistics I
ECON 103-3 Principles of Macroeconomics
ECON 105-3 Principles of Microeconomics
MATH 110-3 Introductory mathematics for the Social and Management Sciences
MATH 157-3 Calculus for the Social Sciences (or equivalent)
plus
• two 200 division ECON or BUEC courses in addition to BUEC 232
• one 000, 100 or 200 ENGL or PHIL course
• one 100 or 200 division HIST or POL course (fulfilled by political science requirements listed above)
• one 100 or 200 division SA or PSYCY course
• one 100 or 200 division BISC, CHEM or PHYS course

*recommended

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

Co-operative Education
Co-operative education helps qualified students to obtain practical experience related to their political science studies. It entails planned study semesters and employment, and is competitive. Not all applicants participate in exactly the placements they choose, but the co-op program does endeavor to provide a placement to all qualified applicants.

For admission, students must have completed 30 credit hours with a minimum CGPA of 3.0. Transfer students must complete at least 15 credit hours at Simon Fraser University.

For details, see see “Co-operative Education” on page 231. Work semester arrangements are made
with the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance.

**Department of Psychology**


Chair
D.J. Weeks BA (Windsor), MSc (McM), PhD (Auburn)

**Professors Emeriti**
B.K. Alexander BA (Miami, Ohio), MS, PhD (Wis)
E. Ames BSc (Tufts), PhD (Cornell)
P. Bakane BA, MA, PhD (NY)
M.L. Bowman BA (Alta), MSc, PhD (McG)
C.B. Crawford BA, MSc (Alta), PhD (McG)
A.L. Diamond BA (Cinc), MA, PhD (Col)
M. Kimball BA (Macaulester), PhD (Mich)
J.E. Marcola BA (Wittenberg), MA, PhD (Ohio State)
V. Modigliani DottFisica (Rome), MA, PhD (Wayne State)
A.C. Paranjape BSc, MA, PhD (Ooona)
J.N. Strayer BA (Col), MA, PhD (S Frasar)
C.F. Schmitt BA (Br Col), MA (Qu), PhD (Dal)

**Professors**
B.L. Beyerstein BA (S Fraser), PhD (Calif)
S.D. Hart BA, PhD (Br Col)
D.L. Krebs BA (Br Col), MA, PhD (Harv)
C.G. McFarland BA (Alta), MA, PhD (Wat)
R. Misliverger BA (McG), PhD (Chic)
M.M. Moretti BA (Brock), MA, PhD (S Fraser)
J.D. Read BA (Br Col), MS, PhD (Kansas)
R.M. Roesh BS (Arizona), PhD (Ill)
W. Turnbull BA (Tor), MA, PhD (N Carolina)
N.V. Watson BA, MA (Wont), PhD (Br Col)
D.J. Weeks BA (Windsor), MSc (McM), PhD (Auburn)
B.W. Whittles BSc, MA, PhD (McM)
S.C. Wright BA (Winn), MA, PhD (McG), Canada

Research Chair
Associate Professors
K. Bartholomew BA (S Fraser), PhD (Stan)
J. Carpendale BA, MA (S Frasar), PhD (Br Col)
D.N. Cox BA, MA, PhD (Br Col)
W.R. Crane BA (Windsor), MA, PhD (York, Can)
Associate Vice-President Academic
R.G. Ley BA (S Fraser), MA, PhD (Wat)
M. Liotti, MD (Naples), PhD (Parma)
M.D. Maran BA (S Fraser), MA (Guelph), PhD (Tor)
I. Torres BA (Virginia), PhD (Parma)*
R.D. Wright BA (Br Col), MA, PhD (Wont)
A. Young BA (Guelph), MSc, PhD (Wat)
Assistant Professors
M. Blair BS (Maryland), MA, PhD (Arizona State)
A.L. Chapman BA (Br Col), MS, PhD (Idaho State)
R.J. Cobb BA (S Fraser), MA, PhD (Calif)
D. Connelly BA, MA (W Laur), LLB, PhD (Vic, BC)
K.S. Douglas BA, MA, PhD (S Fraser), LLB (Br Col)
R.T. Foulds BA, MA, PhD (Br Col)
G. Iarocci BA, MA (McG)
J.J. McDonald BA (S Fraser), MA, PhD (Br Col),
Canada Research Chair
M.T. Tschernish BSc (Hemp), MA, PhD (Kans)
K.L. Slaney BA, MA, PhD (S Fraser)
B.W. Sook BSc (St Louis), MA, PhD (Br Col)
T.M. Spalek BSc, MA, PhD (Tor)
A.E. Thornton BA (Minn), MSc (Memphis State), PhD (Memphis)
W.L. Thornton BA (St Olaf), MSc (Memphis State), PhD (Memphis)

Adjunct Professors
P. Bartel BA, MA, PhD (S Fraser)
S.A. Bayanzadeh MA, PhD (Keele)
R. Brown BSc, PhD (Lond)

K.M. Christensen BA (McG), BSc, PhD (Vic, BC)
V. Di Lollo BA, PhD (WAnust)
R. Doll MSc (Br Col), MSW (Tor)
V.L. Dufi$d BSc, MA, PhD (Fin)
D.G. Dutton BA, MA, PhD (Tor)
Eaves MB, ChB (Liv)
D. Elliott BSc, MSc, PhD (Wat)
R. Faragher BSc, BEd, BEd (Qld)
A. Gordon BSc (McG), MSc, PhD (Qu)
J.F. Hemphill BA (Br Col), MA (Sask), PhD (Br Col)
A.T. Herdman BSc, MSc (S Fraser), PhD (Br Col)
R. Holland BA (York, Can), MD (McM), FRCP
M. Kendrick BA, MA, PhD (Br Col)
D. Kimura BA, MA, PhD (McG)
W. Koch BA (Montana), MA, PhD (Alta)
R. Kropp BA (Br Col), MA, PhD (S Fraser)
M. Kyrkow BS, MB (Adel), MA (Fin)
D.R. Lawe BS (Missouri), MA, PhD (S Illinois)
D. Low MSc, MD (Qu), PhD (Baylor Col)
J.W. MacDonald BA (Detrots), MS, PhD (Wyoming)
J. Martzke BS (WIs), MA, PhD (Iowa)
D.J. Meen BAmMed (Alta), PhD (Manit)
Nicholle BA (Leh), MA, PhD (S Fraser)
J. Ogilv BA (Calg), MA, PhD (Calg)
J.D. Rose LLM (Vic, BC), MA, PhD (S Fraser)
D. Slick BAs (Alaska), MSc, PhD (Vic, BC)
G. Smith BA (BC), MA, PhD (Br Col)
K. Tee BA (Br Col), MA, PhD (S Fraser)
J. Ternes BA (Wat), MA, PhD (Br Col)
G. Tien BSc, MA (S Carolina), PhD (S Fraser)
R.S. Tonkin MDMC, FRCPC, OBC
N. Virji-Babul BHSc (McM), MA (Col), PhD (Wont)
C.L. Wellington, BSc, MA (Br Col)
T. Woodward BSc, MA, PhD (Vic, BC)

Associate Members
R. Corrado, Criminology
A. Horvath, Education
M. Jackson, Criminology
J. Martin, Education
N. O'Rourke, Gerontology
F.J. Pelletier, Philosophy
J. Sugarman, Education
H. Weinberg, Kinesiology

Senior Lecturers
G. Alder BA (S Fraser), MSc, PhD (Calg)
R. Day BA (Vic, BC), MA (Guelph), PhD (S Fraser)
L.J. Foster BA (Br Col), MA (New Br)

Advisors
Ms. T. Anbinder, 5253 Robert C. Brown Hall,
604.291.4840, tabinder@sfu.ca

M. Liotti, MD (Naples), PhD (Parma)

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**Major Program**

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 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 semester and PSYC 200 should follow PSYC 100 as early as possible. (Concurrent registration in PSYC 100 and 102 is not permitted.) PSYC 201 and 210 should be taken during the first four semesters.

To receive a major in psychology, students must

- meet the graduation requirements of the University (see “Student Appeals” on page 37 and Faculty of Arts and Social Sciences (see “Graduation GPA Requirements” on page 129)
- complete one course from group A and 2 courses from group B
- complete 30 upper division psychology credit hours.
- complete 15 upper division psychology credit hours 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

**Continuation**

- maintain a minimum 3.0 CGPA for all courses taken in each semester
- maintain a minimum 3.0 CGPA for all psychology courses taken in each semester
- attend the appropriate graduate area research seminar while enrolled in PSYC 490/499.

**Completion**

Students must complete 60 upper division credit hours, of which 50 must be in upper division psychology courses, including both of...
ATE additional three credit upper division psychology undergraduate advisor. If this waiver is granted, an
PSYC 201 by petitioning the psychology criminology, intend to minor in psychology, and have
courses. At least eight upper division credit hours
psychology credit hours with a CGPA of 2.0. No more
Students must complete one of PSYC 221, 241, 250,
courses taken at Simon Fraser University.

Note:

PSYC 201-4 Introduction to Research Methods in Psychology

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, 241, 250, 260, 270 or 280 and a minimum of 15 upper division psychology credit hours with a CGPA of 2.0. No more than three credit hours may be in directed studies courses. At least eight upper division credit hours must be taken at Simon Fraser University. 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 192 for information.

Joint Major in Psychology and Criminology
For information, see "Joint Major in Criminology and Psychology" on page 146.

Joint Major in Psychology and Women's Studies
See page 178 for information.

Co-operative Education
Co-operative education, for qualified students who want work experience, entails study semesters 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 231. Work arrangements are made through the Faculty of Arts and Social Sciences co-op coordinator who should be consulted at least one semester in advance.

Advice to Students from Other Departments
To register in psychology courses, students must meet the prerequisites or special instructions. The listed prerequisites indicate the minimal background expected by instructors.

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, 410, 411. Students who have a special interest in more extensive statistical training to facilitate their work in psychology should also 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. Registration in these courses enables 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; 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, 604.291.3146 Tel, 604.291.5799 Fax, www.sfu.ca/sociology

Affiliation with the three divisions within the department is shown as follows: A – anthropology; S – sociology, LAS – Latin American studies development.

Chair
J. Pulkingham MA, PhD (Edin)

Professors Emeriti
H. Adam Dipl Sociol DrPhl (Fran), Habilitation
H. Sharma MA (Delhi), MS (Cleveland), PhD (Cornell) – S
I.J. Whitaker MA (Cam), DPhil (Oxford) – A
R.W. Wylie BA (Leic) – S

Professors
P. Dossa BA, MA (Edin), PhD (Br Col) – A
N. Dyck BA, MA (Sask), PhD (Man) – A
M. Howard BA, MA, PhD (WAustralia) – A
M. Kenny BA, MA (Virginia), DipSocAnthrop, DPhil (Oxford) – A
A. McLaren BA (Br Col), MA (Iowa), PhD (Lond) – S
G. Otero BA IT (Monterey), MA (Tex), PhD (Wis) – S
G.B. Teeple MA, BA (Tor), DPhil (Sus) – S

Associate Professors
M. Boelshers Ignace MA (Georg August Universitat), PhD (S Frasier) – A
D.E. Chun BA (Br Col), MA, PhD (Tor) – S

D. Culhane BA, PhD (S Frasier) – A
M. Gates BA (Shef), MA, PhD (Br Col) – A
D. Lacombe BA (Sher), MA, PhD (Tor) – S
B. Mitchell BA, MA (Wat), PhD (McM)** – S
C.K. Patton BA (Appalachian State), MTS (Harvard), PhD (Mass), Canada Research Chair**** – A
S. Pigg BA, MA, PhD (Cornell) – A
J. Pulkingham MA, PhD (Edin) – S
J.M. Whitworth BA (Leic), DPhil (Oxford) – S

Assistant Professors
Y. Atasoy BSc (AcadSocSc, Ankara), MSc (MidEastTech, Ankara), PhD (Tor) – S
F. DeMaio BA (Tor), MA (Essex), PhD (Essex) – S
K. Froschauer BA, MA (Br Col), PhD (Car) – S
A. Travers BA (S Frasier), MA (Br Col), PhD (Oregon) – S
H. Wittman BA (Wash), MA, PhD (Cornell)

Adjunct Professors
R. Bateman MA, MA (Oklahoma), PhD (Johns Hopkins) – A
G. Rush BA (Br Col), PhD (Oregon) – S
S. Migliore, BA, MA, PhD (McM) – A
F. Vahabzadeh BA, PhD (S Frasier) – S

Lecturer
J. Bogardus BA, MA (Br Col), PhD (S Frasier) – A

Advisor
Ms. K. Payne, 5056 Academic Quadrangle, 604.291.3726

Faculty Advisor
Dr. J. Bogardus BA, MA (Br Col), PhD (S Frasier), 5078 Academic Quadrangle, 604.288.6629

**joint appointment with First Nations studies
***joint appointment with gerontology
****joint appointment with women’s studies

The department’s courses provide theoretical and empirical understanding of the social and cultural forces 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 intercultural 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, 292 and 293, which require no prerequisites. Other courses dealing with important contemporary issues such as SA 202, 203, 218 and 260 are open to students with one introductory course.
Course Selection
Consult departmental hand-outs available in the SA general office, as there are differing emphases in course outlines from semester to semester.

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 441 of the Course Catalogue.

Anthropology Courses
SA 101, 201, 245, 286, 293, 301, 318, 323, 332, 352, 401, 402, 451, 472, 486, 496

Sociology Courses
SA 150, 202, 231, 250, 260, 292, 304, 321, 322, 325, 326, 327, 331, 333, 335, 390, 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 "Faculty of Arts and Social Sciences Breadth Requirements" on page 129.

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 256-4 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, however, 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 specific requirements). 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 prepare by balancing theory courses with methods courses over and above the required minimum. Beyond this, 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 335-4 Political Sociology
SA 337-4 Sociology of Knowledge
SA 333-4 Schooling and Society
SA 350-4 Classical Sociological Thought
SA 351-4 Classical Marxist Thought
SA 354-4 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

Anthropology Major Program
Students must complete 32 credit hours in upper division SA courses, including the following.

SA 301-4 Contemporary Ethnography
SA 355-4 Ethnography and Qualitative Methods
SA 402-4 The Practice of Anthropology
plus two of
SA 318-4 The Anthropology of Medicine
SA 332-4 The Anthropology of Domestic Life
SA 401-4 The Politics of Culture in Contemporary Societies
SA 451-4 Issues in Anthropological Theory
SA 460-4 Issues in Anthropology and Sociology

when (an A topic only)
SA 463-4 Special Topics in Development Studies

when (an A topic only)
SA 472-4 Anthropology and the Past (highly recommended)
SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

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
and one of
POL 315-4 Quantitative Methods in Political Science
SA 355-4 Quantitative Methods
and one of
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 Archaeology and Anthropology
Please see "Joint Major in Archaeology and Anthropology" on page 132.

Joint Major in Art and Culture Studies and Anthropology
Please see "Joint Major in Anthropology or Sociology, and Art and Culture Studies" on page 143.

Joint Major in Anthropology or Sociology and Canadian Studies
Please see "Joint Major Programs" on page 134.

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
lower division courses, consider the prerequisites for upper division courses. **Upper Division Requirements**

Students must complete 40 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 one of POL 315-4 Quantitative Methods in Political Science
- plus two of
  - SA 318-4 The Anthropology of Medicine
  - SA 332-4 The Anthropology of Childhood
  - SA 451-4 Issues in Anthropological Theory
  - SA 460-4 Issues in Anthropology and Sociology (when an A topic only)
  - SA 463-4 Special Topics in Development Studies (when an A topic only)
  - SA 472-4 Anthropology and the Past* 
  - SA 486-4 Aboriginal Peoples and British Columbia: Advanced Seminar

An additional 12 upper division credit hours are required, to be chosen from any SA or S course. *highly recommended

### Joint Major in Sociology or 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
- one of
  - SA 201-4 Anthropology of Contemporary Life
  - SA 245-4 Cultures and Images
- one of CMNS 260-3 Introduction to Empirical Communication Research Methods
- STAT 203-3 Introduction to Statistics for the Social Sciences

**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 250-4 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 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

- 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 relation 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, anthropology and criminology and a joint degree in sociology and anthropology. Students interested in a joint program in sociology, anthropology or criminology should contact both department advisors.

**Anthropology 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 of
  - CRIM 220-3 Research Methods in Criminology
  - SA 255-4 Introduction to Social Research

**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

### 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 133-3 Psychology 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
  - BUED 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 registering 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 registering 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 332-3 Criminal Procedure and Evidence
CRIM 333-3 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
STAT 203-3 Introduction to Statistics for the Social Sciences

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
POL 315-4 Quantitative Methods in Political Science
and one of
SA 356-4 Ethnography and Qualitative Methods
SA 357-4 Survey Research

Upper Division Anthropology Requirements

Students must complete 20 credit hours in anthropological or SA courses, which must include

SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods

For complete requirements, see “Joint Major Programs” on page 179.

Joint Major in Anthropology and Linguistics

For requirements, see “Joint Major in Linguistics and Anthropology” on page 170.

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 187.

Honors and Joint Honors Programs

Sociology Honors Program

In addition to the specified lower division requirements (see “Major Programs” on page 179), students must complete 52 credit 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. Honors students must complete SA 499.

Theory Requirements

Please see “Major Programs” on page 179. Theory requirements should be taken as early as possible in the upper divisions.

Methods Requirements

Please see “Major Programs” on page 179. 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 179), 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 179. Theory requirements should be taken as early as possible in the upper division program.

Methods Requirements

Please see “Major Programs” on page 179. 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 179), 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 179. Theory requirements should be taken as early as possible in the upper division program.

Methods Requirements

Please see “Major Programs” on page 179. 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 134.

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 5 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.

Southeast Asia Field School

Field School Leader
M. Howard BA, MA, PhD (WAust)

Through study and travel in Vietnam and Thailand, this field school serves as an introduction to Southeast Asia for undergraduate students. The program is approximately 13 weeks and consists of three courses (12 credit hours). Arrangements can be made for students who have taken one or more of these courses to receive credit for other suitable courses. Graduate students may also participate.

All instruction will be in English, however there will be a brief introduction to the Thai language.

The first month of the school is in northern Vietnam, including Hanoi, and field trips to mountains of the northwest. The remaining two months are in Thailand. Students reside on various university campuses and take field trips. In addition to long periods in southern Thailand (based in Hat Yai and Pattani) and in northern Thailand (based in Chiang Mai), the field school visits central and northeastern Thailand.

The field school is generally held every other year, with the next one being held in the summer semester 2006. Admission is by application. Students must be in good academic standing and have completed an introductory anthropology course. Contact the department or SFU International for more information.

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, ethnicity, 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 345-4 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 340-4 Social Issues and Social Policy Analysis
SA 255-4 Introduction to Social Research

SA 231-4 Sociology of Families
and one of
KIN 110-3 Human Nutrition: Current Issues
KIN 140-3 Contemporary Health Issues
one of
HIST 310-4 Women and the Family in Modern Europe
SA 331-4 Politics of the Family
SA 332-4 Anthropology of Childhood

Students must complete at least four of the following:

*If students choose more than one of these courses, it/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 336-4 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

Optional Courses
To fulfil 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
EGEO 102-3 World Problems in Geographical Perspective
EGEO 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

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
POLS 352-4 Canadian Local and Urban Government Politics
POLS 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 Society 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 semesters and employment in an area of the student’s choice.

Requirements
To be admitted into the program, students must have completed 29 hours with a minimum CGPA of 2.75. 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

and one of

SA 202-4 Post-Industrial Society
SA 203-4 Comparative Ethnic Relations
SA 263-4 Peasants, Proletarians and the Global Economy

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 semester(s) already taken but applicability depends on the evaluation of the Department of Sociology and Anthropology.

Work semesters are made through the Faculty of Arts and Social Sciences and department co-op co-ordinators. For program continuance, a minimum 2.75 cumulative GPA is required. See “Co-operative Education” on page 231 or contact the department.

Statistics Program

TLX10545 Shrum Science Centre, 604.291.3803 Tel, 604.291.4368 Fax, www.stat.sfu.ca, stat@sfu.ca

Chair of Statistics and Actuarial Science

R.D. Routledge BSc (Qu), MSc (Alta), PhD (Dal)

Professor Emeritus

M.A. Stephens BSc (Brist), AM (Harv), PhD (Tor)

Associated Faculty within Department of Statistics and Actuarial Science

R. Atman
D. Bingham
C.B. Dean
J. Graham
J. Hu
R.A. Lockhart
Y. Lu
B. McNerney
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)

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 226 in the Faculty of Science section.

The following programs train 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.

Prerequisite Grade Requirement

A C- grade or better in prerequisites for STAT courses offered by the Department of Statistics and Actuarial Science is required.

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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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 128 for general regulations, breadth requirements, upper division credit, etc. Students must obtain credit for the following.

Lower Division Requirements

Mathematics

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

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 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

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 courses in mathematics, statistics, actuarial mathematics or mathematics/computing science. See a department advisor before selecting these courses. STAT 380 and 460 are recommended. Neither STAT 301 nor 302 or 403 may be used to fulfill this requirement.

Minor Program

Students are also required to complete a minor in another discipline other than mathematics or statistics. The certificate in actuarial mathematics may be used to 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 128 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 Non-Parametric Statistics* STAT 460-3 Decision Analysis and Bayesian Inference *contact the statistics department

Minor Program

Statistics minor program requirements are listed in Department of Statistics and Actuarial Science (page 226) 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.

Centre for Sustainable Community Development

2100 East Academic Annex, 604.291.5849 Tel, 604.291.5473 Fax, www.sfu.ca/cscd

Director

M.L. Roseland, BA MA (Wesleyan, Conn), PhD (Br Col)

Advisor

Ms. C. Lai BA (Singapore), 2128 East Academic Annex, 604.291.5849, cedadmin@sfu.ca

The Community Economic Development (CED) Centre has become the Centre for Sustainable Community Development (CSCD). The CED certificate and diploma program has become Sustainable Community Development.

Community economic development enables communities to initiate and generate solutions for their common economic problems and thereby build long term community capacity and foster integration of economic, social and environmental objectives. The Centre for SCD is actively involved in community based projects throughout the province and offers an undergraduate certificate and a post baccalaureate diploma, both available by distance education.

Certificate

This program offers basic accreditation in community-based social and economic development and is for those who seek an holistic, active, practical credential with an undergraduate degree. It offers theoretical and practical perspectives on alternate rural and urban economic strategies and ecologically sustainable communities. Students may take this program with or without registration 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 semester, October 1 for spring semester, February 1 for summer semester, Intercension 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 CGPA in all SCD courses to obtain the certificate.

Fifteen credit hours are earned by completed four core courses:

- SCD 201-3 Introduction to Community Economic Development
- SCD 301-4 Sustainable Community Development
- SCD 401-4 Concepts, Techniques and Principles for CED Practice
- SCD 403-4 Models and Cases in Community Economic 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 fulfillment 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 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 183.

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 economic, social and cultural community development.

New application deadlines: May 1 for fall semester, October 1 for spring semester, February 1 for summer semester, Intercension 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
- SCD 401-4 Concepts, Techniques and Principles for CED Practice
- SCD 403-4 Models and Cases in Community Economic Development
- SCD 404-4 Project

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 registering and include the course description. Students should complete electives early in the registration 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 to a topic in the 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 registration priority to their own students and will not necessarily permit SCD students to register. Check all Calendar entries and consult both department and CSCD advisors before registering.

Otherwise 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 available at the Centre for Sustainable Community Development and its web site www.sfu.ca/cscd See also “Centre for Sustainable Community Development” on page 183 for information about research activities.

Department of Women’s Studies

5102A Academic Quadrangle, 604.291.3333 Tel, 604.291.5518 Fax, www.sfu.ca/womens-studies

Chair

M.L. Stewart BA (Calg), MA, PhD (Cal)

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 (M’Al), 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 (Cal)

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 (Manit)

Assistant Professors

L. Campbell BA (McM), MA (Tor), PhD (Qu)
H. Leung BA (Ox), MA, PhD (Wis)
M. MacDonald BEd (Qu), BSc (M’Al), PhD (W’est)

Associate Members

M. Bubber, Library
B. Burch, Criminology
P. Busa, Sociology and Anthropology
O. Hankivsky, Political Science
J. Matsumura, History
A.T. McLaren, Sociology and Anthropology
K. Mezey, English
M.H. Morrow, Health Sciences

Advisor

Ms. R. Rogers BA (S Fraser), 5103 Academic Quadrangle, 604.291.3593, wsda@sfu.ca

*joint appointment with contemporary arts
**joint appointment with political science
***joint appointment with psychology
****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 “Faculty of Arts and Social Sciences Breadth Requirements” on page 129.

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?

Simon Fraser University 2006 - 2007 Calendar
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 (GDS 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.

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 GDS 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 register in a particular upper division course, contact the undergraduate advisor in the appropriate department well in advance of any attempt to register.

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's 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 Deviant Behaviour. 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 credits 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 129 for further details.

Joint Major in Criminology and Women's Studies
Advisors
Ms. M. McIlroy, School of Criminal Justice, 2644 Diamond Building, 604.291.3645
Ms. R. Rogers BA (SFU), Department of Women's Studies, 5105 Academic Quadrangle, 604.291.3593

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 register 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:
POLS 100-3 Introduction to Politics and Government
POLS 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 320-3 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, 604.291.4835
Lower Division Requirements

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 one of WS 207-3 Introduction to Feminist Theory and WS 208-3 Feminist Research Methods.

Upper Division Requirements

English Requirements
Students should select courses which focus on women writers and/or offer an explicit feminist perspective. 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, 322, 400, 404, 407, 410 and 416; and one from within the grouping of ENGL 354, 357, 359 and 455. Four credit hours must be at the 400 division.

Women's Studies Requirements
Students must complete 20 upper division credit hours in women's studies including both of WS 304-4 Women and Religion and WS 305-4 Conceiving Creativity. Twenty-two credit hours must be taken at Simon Fraser University.

Joint Major in History and Women's Studies
Advisors
Mrs. T. Wright BA (S Fraser), Department of History, 6026 Academic Quadrangle, 604.291.4429
Ms. R. Rogers BA (S Fraser), Department of Women's Studies, 5105 Academic Quadrangle, 604.291.3593

This is an inter-department program for those who are interested in exploring relationships 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 both of WS 101-3 Introduction to Women's Issues in Canada and WS 102-3 Introduction to Western Feminisms.
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 250-4 Introduction to Sociological Theory
SA 255-4 Introduction to Social Research
STAT 203-3 Introduction to Statistics for the Social Sciences
SA 231 is highly recommended.

Anthropology
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology
SA 255-4 Introduction to Social Research
STAT 203-3 Introduction to Statistics for the Social Sciences
and one of
SA 201-4 Anthropology of Contemporary Life
SA 286-4 Aboriginal Peoples and British Columbia: Introduction
SA 293-4 Special Topics in Anthropology
SA 231 is highly recommended.

Women’s Studies
Students must complete 15 lower division credit hours in women’s studies including all off
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
and one of
WS 207-3 Introduction to Feminist Theory
WS 208-3 Feminist Research Methods

Upper Division Requirements
Sociology
SA 350-4 Classical Sociological Thought
SA 355-4 Quantitative Methods
Students must also complete an additional 12 credit hours of upper division SA credit.

Anthropology Requirements
SA 301-4 Contemporary Ethnography
SA 356-4 Ethnography and Qualitative Methods
Students must also complete an additional 12 credit hours of upper division SA credit.
The following are highly recommended for both sociology and anthropology.
SA 319-4 Culture, Ethnicity and Aging
SA 356-4 Ethnography and Qualitative Methods
SA 332-4 The Anthropology of Childhood
SA 335-4 Gender Relations and Social Issues
SA 340-4 Social Issues and Social Policy Analysis
SA 420-4 Sociology of Aging

Women’s Studies
Students must complete 20 upper division credit hours in women’s studies.
Exceptionally and only with department permission, one course designated as women’s studies credit offered by another department may be substituted for one WS course.

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 231. Arrangements for work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator, who should be consulted at least one semester in advance.
Faculty of Business Administration

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 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 (BSc) Honors in Business Administration Joint Honors in Business Administration and Economics Joint Honors in Molecular Biology and Biochemistry and Business Administration

Undergraduate Programs
Executive Director
W. Holmes MA (Watt), MBA (Br Col), 2387 Lohn Building, 604.291.3700 Tel, 604.291.5571 Fax

Co-ordinator
C. Hamblin BA (S Fraser), 2389 Lohn Building, 604.291.4624 Tel, 604.291.5571 Fax

Student Affairs Officer
S. Thiara BBA (S Fraser), 2327 Lohn Building, 604.268.6833 Tel, 604.291.5571 Fax

Advisors
Ms. M. Czornobay, undergraduate program advisor, 2325 Lohn Building, 604.291.3747 Tel, 604.291.5571 Fax

Ms. J. Gehiere BA (S Fraser), undergraduate program advisor, 2329 Lohn Building, 604.268.7063 Tel, 604.291.5571 Fax

Ms. K. White BFS (S Fraser), undergraduate program advisor, 2323 Lohn Building, 604.291.5541 Tel, 604.291.5571 Fax

Please visit www.sfu.business.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 emphasizing. 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
Admission Requirements

Criteria
Students will be selected competitively from one of four streams.

Category 1 – direct from secondary school
A portion of the annual admission will be selected from secondary school graduates based on the general Simon Fraser University admission requirements plus mathematics 12.*

Category 2 – direct from college
A portion of the annual admission will be selected from students who have graduated from community colleges or technical institutes. These students must have completed all of the required lower division courses (except BUS 207 and 254 which may be completed after faculty admission**). Students will be selected competitively based on the cumulative grade point average.

Category 3 – all courses at Simon Fraser University
A portion of the annual admission will be selected from students who have completed all of their courses at Simon Fraser University including the lower division requirement courses (except BUS 207 and 254 which may be completed after faculty admission**). Students will be selected competitively based on the cumulative grade point average.

Category 4 – some Simon Fraser University and other post-secondary courses
A portion of the annual admission will be selected from students who have completed some courses at Simon Fraser University and some at other post-secondary institutions including the lower division requirement courses (except BUS 207 and 254 which may be completed after faculty admission**). Students will be selected competitively based on a grade point average which will be a combination of grades earned at Simon Fraser University and other institutions. Note: minimum Simon Fraser University CGPA of 2.25 required. To be considered for admission to the faculty, students in categories 2, 3 and 4 must have completed each lower division requirement course with a minimum C- grade. The number of undergraduate students granted entry to the faculty is limited to 500 to 600 new students per academic year. *or equivalent advanced placement or international baccalaureate courses as listed under General Admission Requirements for British Columbia Secondary Schools. **if BUS 207 and/or 254 have been taken, they will be calculated into the GPA used for faculty admission.

Application Procedures
Students applying under category 1 or 2 should apply to the faculty at the same time that they apply for admission to the University. Category 3 or 4 applicants should apply to the faculty after completing the 30th credit hour and before the 60th. Students should apply during the semester in which the lower division requirements, as listed below (except BUS 207 and 254) are completed. Students not accepted upon initial application may reapply. Unsuccessful applicants may appeal through the faculty admissions appeals committee.

Application Deadlines
April 1st for summer semester
August 1st for fall semester
December 1st for spring semester

Application forms are available in the undergraduate program offices in the second month of the semester.

Non-Majors Access to Business Courses
Priority in upper division business courses is given to those students who are approved in a business program. (A business program is defined as major, honors, and joint programs.) Students are permitted to undertake the lower division business courses without formal faculty admission. Students other than those accepted into a program in business administration may take upper division business administration courses contingent upon space available on day 5 of the first week of classes. students must complete all of the required lower division courses which may be completed after faculty admission**. Students will be selected competitively based on the cumulative grade point average.

General Requirements
In addition to the specific requirements for major, minor, honors and joint programs, all students should note the following.

In addition to normal university grade point average requirements, the faculty requires for continuance in all programs a minimum 2.25 CGPA and a minimum CGPA of 2.00 in all business administration courses. For a course to be accepted as fulfilling a prerequisite, or for a lower division requirement, or for a core course to be accepted in a student's program in business administration, a student must have obtained a minimum grade of C- (C minus).

Students with fewer than 60 credit hours may enrol in a maximum of 18 credit hours. All upper division BUS courses have a prerequisite of 60 credit hours. However, approved Business Administration majors or minors may take 300 division BUS courses upon completion of 45 credit hours.

For a course to be accepted as fulfilling a prerequisite, or for a core course to be accepted in a student's program in business administration, a student must have obtained a minimum grade of C- (C minus).

Letters of Permission
Please see "Courses at Other Institutions/Letters of Permission" on page 33. The Faculty of Business Administration does not normally approve letters of permission for students already registered 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 more 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. Courses taken as part of group requirements (see “Group Requirements” below) or non BUS or non BUEC courses taken as part of the lower division requirements may count toward the 50 credit hours outside business administration.

Lower Division Requirements
BUEC 232-4 Data and Decisions I (or STAT 270)
BUS 207-3 Managerial Economics* (or ECON 301)
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 (or MATH 151 or 154) 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
*courses with an asterisk (BUS 207 and 254) may be completed following admission to the faculty.

Group Requirements
To satisfy the three group requirements (groups A, B and C), students must complete the following.

Group A
Students must complete four courses from at least two departments from the following: contemporary arts, English, history, humanities, languages, linguistics, philosophy.

Group B
Students must complete four courses from at least two of the following departments: archaeology, Asia-Canada, Canadian studies, communication, criminology, economics, education, geography (excluding all physical geography courses), gerontology, Latin American development studies, political science, psychology, sociology and anthropology, women's studies.

Group C

Note: courses selected to meet the group requirements may be upper or lower division and need not be completed prior to faculty application.
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)
- an area of concentration (see Areas of Concentration below)
- at least three 400 division BUS or BUEC courses (excluding practicum courses and BUS 478). These courses may count toward the requirements for the area(s) of concentration.

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 register 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 360-3 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 322-3 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

Entrepreneurship
BUS 361-3 Project Management
BUS 477-4 New Venture Planning
and two* of:
BUS 314-3 New Venture Finance
BUS 362-4 Systems Analysis and Design
BUS 443-3 New Product Development and Marketing
BUS 486-3 Leadership

*one must be a 400 division course

Finance
BUS 312-4 Introduction to Finance
BUS 315-4 Investments
BUS 316-3 Derivative Securities
and two of:
BUS 410-3 Financial Institutions
BUS 413-4 Corporate Finance
BUS 417-4 Security Analysis
BUS 418-3 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
BUS 481-3 Recruitment and Selection
BUS 484-3 Employment Systems
BUS 486-3 Leadership
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 Management
and three of:
BUS 485-3 Negotiations and Conflict 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
and one of:
BUS 431-3 Business with East Asian Countries
BUS 492-3 Selected Topics in Business Administration
BUS 493-3 Selected Topics in Business Administration
BUS 494-3 Selected Topics in Business Administration
BUS 495-3 Selected Topics in Business Administration

Students must also complete one of any 400 division international business course that has not previously been used to satisfy the above requirements, or one of:
BUS 418-3 International Financial Management
BUS 447-3 International Marketing Management

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 362-4 Information Analysis and Systems Design
BUS 364-3 Information Systems in Organizations and Society
BUS 468-3 Management Issues in Information Systems
and one of:
CMPT 110-3 Event Driven Programming in Visual Basic
CMPT 117-3 Internet Programming Using JAVA

Management Science
BUS 336-4 Data and Decisions II
BUS 473-4 Operations Management
and two of:
BUS 462-4 Management Support Systems
BUS 464-3 Building Business Systems
BUS 466-3 Managing Data Communications
BUS 492-495-3 Selected Topics courses

Marketing
BUS 343-3 Introduction to Marketing
BUS 347-3 Consumer Behavior
BUS 442-4 Introduction to Marketing Research
and two 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 449-3 Marketing and Society

*at least one of these must be BUS 344, 446, or 447

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, continuation and graduation, 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)

**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.
At least 16 upper division BUS or BUEC credit hours are required including the following.
BUS 312-4 Business Finance
BUS 343-3 Introduction to Marketing
and one of
BUS 374-3 Organization Theory
BUS 381-3 Introduction to Human Resource Management

**SFU Business@Surrey**
Associate Director
D.C. Parker BCom, MBA (Calg), PhD (W Ont), Surrey 15-160, 604.268.7446 Tel, 604.268.7485 Fax
The first two years of study are similar at both the Burnaby and Surrey campuses since the core courses are common requirements for the BBA program across all campuses. The first year of study involves preparatory courses in academic disciplines that form the basis for business studies. At Simon Fraser University Surrey, these first year courses are offered through integrated, cohort-based programs in the Faculty of Arts and Social Sciences (Explorations), Faculty of Science (Science List 1 or 2), or Faculty of Applied Sciences (TechOne).
Students preparing for business via any of these routes should complete ECON 103, 105, BUS 251, MATH 157 (or MATH 150, 151, or 154) during their first year. Details of each first year program can be viewed at http://www.sfu.ubusiness.ca/surrey/program Overview/year_one.php
The third and fourth year of study are also similar at both campuses. Students complete core upper division business courses, at least one area of concentration, and lower and upper division electives. The entrepreneurship, finance, management and technology, and marketing concentrations are offered at the Surrey campus. However, students who choose to specialize in a concentration that is not offered in Surrey can complete those concentration requirements at the Burnaby campus. Details of the third and fourth year of the degree program can be viewed at http://www.sfbusiness.ca/surrey/program Overview/year_two.php
Services such as the Business Co-operative Education Program, the International Exchange Program, the Business Career Management Centre, and the Business Student Affairs Office, will be available at both campuses.

**Joint Programs**

**Common Requirements**
All joint major and honors programs require the student to qualify for, and receive admission to the program, and must remain qualified for continuation in the Faculty of Business Administration, and must be accepted as a joint major or joint honors in the co-operating department or school.

The lower division requirements and core courses of the Faculty of Business Administration must be completed, except as specifically modified below (see "Core Courses" on page 190). For joint programs, BUS 360 is recommended but not required. BUS 360 will be waived as a prerequisite for 400 division BUS courses for students in approved BUS joint programs.

With the exception of the joint major in molecular biology, biochemistry and business administration (MBB&B), students in joint programs may opt for a degree from either faculty involved. The MBB&B joint major results in a bachelor of science degree from the Faculty of Science. Faculty requirements will be governed by the faculty from which the student chooses to take a degree.

**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
and at least one of the following
BUS 445-3 Analysis of Data for Management
BUS 446-4 Marketing Strategy
BUS 448-4 Advertising and Sales Promotion
BUS 449-3 Marketing and Society

**Communication Lower Division Requirements**
CMNS 110-3 Introduction to Communication Studies
CMNS 130-3 Explorations in Mass Communication
and six 200 division CMNS courses for a total of 24 credit hours in communication including both of
CMNS 221-3 Media and Audiences
CMNS 223-3 Advertising as Social Communication
and 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

**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 continuation 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
STAT 270-3 Introduction to Probability and Statistics
and 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
BUS 251-3 Financial Accounting I
BUS 254-3 Managerial Accounting I
BUS 272-3 Behavior in Organizations
CMPT 150-3 Introduction to Computer Design
CMPT 225-3 Data Structures and Programming
CMPT 275-4 Software Engineering
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MATH 101-3 Discrete Mathematics I
MATH 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 Information Systems in Business Administration and Computing Science” on page 115 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 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 353-4 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
"BUEC courses may count only once as business administration credits or as economics credits.

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 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 Latin American development studies credit hours, 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 168).

Joint Major in Molecular Biology and Biochemistry and Business Administration
See "Joint Major in Molecular Biology and Biochemistry and Business Administration” on page 221.

Joint Major in Business Administration and Psychology
Business Administration Requirements
• successful completion of at least one 400 division management and organization studies course
• 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 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 five 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 403-3 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 221.

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  
- group requirements  
- 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  

For information about required grade point averages for the BA credential, Grade Point Averages Needed for Graduation 35.

exchange agreements with the following institutions:  
- Austria  
  Vienna University of Economics and Business Administration  
- Chile  
  Pontificia 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  
- Italy  
  Bocconi University  
- Japan  
  Ritsumeikan Asia-Pacific University  
- Korea  
  Yonsei University  
  Seoul National University  
- Mexico  
  Instituto Tecnologico Autonomico de Mexico (ITAM)  
  Instituto Tecnoligico y de Estudios Superiores de Monterrey (ITESM)  
- Netherlands  
  Maastrict University  
- New Zealand  
  University of Auckland  
- Norway  
  BI Norwegian School of Management  
- Singapore  
  National University of Singapore  
- 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 their site, 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.

Co-operative Education  
2310 Lohn Building, 604.291.3619 Tel, 604.291.5922 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 semesters with full time paid work semesters 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 accountant option must complete four work semesters. A co-operative education designation requires four work semesters and a certificate requires three work semesters.  
During study semesters 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. Hawkins BA (Br Col), 2361 Lohn Building, 604.291.5544 Tel, 604.291.3028 Fax, bbacareers@sfu.ca, www.sfu.ca/business.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/business.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

8622 Education Building, 604.291.3395 Tel, 604.291.3203 Fax, www.educ.sfu.ca

Dean
P. Shaker BA, MA, PhD (Ohio State)

Associate Dean
P.P. Grimmett BA (Newcastle, UK), BEd (Keele), MA, MEd (Alta), EdD (Br Col)

Professors
M. Fettes MA (Camb), MSc (Br Col), PhD (Alta)
C.M. Dehler BA, PhD (C'dia) EdD (Harvard)
S. Blenkinsop BScH (Qu), MS (Minn), MEd, (Calif)
C. Snowber BA (SWMass), MA (Gordon-Conwell), EdD (Harvard)
Y. Senyshyn BEd, MusM, EdD (Tor)
D. Moore BA, MA, PhD (Stendhal)
L.J. LeMare BA (S Fraser), MA, PhD (Wat)
L. LaRocque BEd (McG), MA (Vic, BC), PhD (Br Col)

Associate Professors
R. Zazkis BA, MA, DSc (Haifa Technion)
C.M. Mamchur BA, BEd, MEd (Sask), EdD (Flor)
P. Shaker BA, MA, PhD (Ohio State)
K. Toohy BA, MEd (Alta), PhD (Tor)
R. Winden BSc, MEd (Bucknell), PhD (Stan), Canada Research Chair
Z. Zaksis BA, MA, DSc (Haifa Technion)

Professors Emeriti
P.E. Coleman BA, MA, EdD (Br Col)
J.F. Ellis BA, MA (Br Col), EdD (Calif)
M. Gibbons BA (Br Col), MA (Wash), EdD (Harv)
A.K. Zaepkleides BA (Athens), MEd, EdD (Temple)
G. Kirchner BPE (Br Col), MS, EdD (Oregon)
M. McClaren BEd, PhD (Br Col)
A.A. Obadia BA (Montr), MA (McM), PhD (Ott)
S. Wassermann BS, MS (CCNY), EdD (NY)
M.F. Widen BA, BEd, MEd (Sask), PhD (Colorado)
B.Y.L. Wong BA (Keele), MA (Vic, BC), EdD (Br Col)

Post Baccalaureate Diploma in Early Childhood Education
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

Breadth Requirements
Upper Divisions (BEd degree, education minors, certificate in literacy instruction, post baccalaureate diplomas)
Contact the Undergraduate Advising Office, 8560 Education Building, 604.291.3436

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 and 406
  - 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 and 406
- two of EDUC 220, 230, 240 or 250
- EDUC 401, 402 and 405
- 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 education designs for learning courses (may include courses taken for EDUC 404 and the education minor)
- certificate in liberal arts
- Students must achieve both a minimum cumulative grade point average (CGPA) of 3.0 and a minimum grade point average (GPA) of 3.0 calculated on the basis of all upper division courses taken at Simon Fraser University.

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, 604.291.4356.
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
A minor from the Faculty of Education
EDUC 404 (minimum of 15 hours of upper EDUC credits)
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 credits.

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-offa/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 PDP. See “Professional Development Program (PDP)” on page 198.

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 232-3 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 332-3 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.

Upper Division Requirements
EDUC 220-3 Introduction to Educational Psychology
PSYC 250-3 Introduction to Developmental Psychology

Minor in Curriculum and Instruction
This minor is for those desiring theoretical and practical expertise in contemporary approaches to curriculum development and instructional design.

Upper 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

Lower Division Requirements
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.

Upper Division Requirements
PSYC 250-3 Introduction to Developmental Psychology
EDUC 464-4 Early Childhood Education
EDUC 477-4 Designs for Learning: Art
EDUC 478-4 Designs for Learning: Music
EDUC 479-4 Designs for Learning: Group Work
EDUC 367-4 Teaching Children from Minority Language Backgrounds in Elementary Classrooms
EDUC 422-4 Learning Disabilities
EDUC 441-4 Multicultural/Anti-Racist Education
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 Sciences

Minor in Education and Technology
This minor provides a structure for undergraduate studies of education and technology.

Upper 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
EDUC 250-3 Studies in the History of Education in the Western World

Lower Division Requirements
EDUC 220-3 Introduction to Educational Psychology
EDUC 230-3 Introduction to Philosophy of Education
EDUC 240-3 Social Issues in Education
EDUC 475-4 Designs for Learning: Elementary Mathematics
EDUC 476-4 Designs for Learning: Elementary Sciences

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 330-3 Movement Language elements for Dance in Education
EDUC 457-4 Drama and Education
EDUC 459-4 Instructional Activities in Physical Education
EDUC 465-4 Children’s Literature

Simon Fraser University 2006 • 2007 Calendar
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 101-3 Critical Thinking
- PHIL 120-3 Introduction to Moral Philosophy
- PSYC 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 404-3 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 324-2 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.

Prerequisite Courses

Students must 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).

Required Courses

Students must complete

- EDUC 380-4 Introduction to Teaching French in Canadian Contexts
- plus one of
- EDUC 480-4 Designs for Learning: French as a Second Language
- EDUC 481-4 Designs for Learning: French Immersion Programs and Francophone Schools
- plus two of the following when taught in French
- EDUC 414-4 Designs for Learning: Secondary Social Studies
- EDUC 415-4 Designs for Learning: Secondary Mathematics
- 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

Explorato Program at Université Laval

Simon Fraser University has an official agreement with Université Laval Language School (ELUL) in Québec City. Students in this program can take specially designed methodology courses in the Explorato 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.

Required Courses

Students must complete one of the following.

- EDUC 100-3 Questions and Issues in Education
- EDUC 230-3 Introduction to Philosophy of Education
- EDUC 250-3 Studies in the History of Education in the Western World
- EDUC 428-4 Nature and Nurture of Gifted Students
- EDUC 435-4 Infusing Global Perspectives in Curriculum
- EDUC 471-4 Curriculum Development: Theory and Practice
- EDUC 474-4 Designs for Learning: French Immersion Programs and Francophone Schools
- EDUC 475-4 Designs for Learning: Elementary Social Studies
- EDUC 476-4 Designs for Learning: Elementary Science

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 semester 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 an official document 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 Disabilities

This minor enhances understanding of learning disabilities and provides competence in identification and non-clinical treatment of learning disabilities.

Lower Division Requirements

- EDUC 220-3 Introduction to Education Psychology

Recommended Lower Division Courses

It is strongly recommended that minor program students complete at least one of the following.

- KIN 110-3 Human Nutrition: Current Issues
- PSYC 100-3 Introductory Psychology I
- PSYC 102-3 Introduction to Psychology II
- PSYC 221-3 Introduction to Cognitive Psychology
- PSYC 250-3 Introduction to Developmental Psychology

Upper Division Requirements

Students must complete a minimum of 15 credit hours as specified below. Five of these credit hours must be at the 400 level.

- EDUC 367-4 Teaching Children from Minority Language Backgrounds in Elementary Classrooms
- EDUC 429-4 Nature and Nurture of Gifted Students
- EDUC 467-4 Curriculum and Instruction in Teaching English as a Second Language
- EDUC 475-4 Designs for Learning: Elementary Mathematics
- PSYC 325-4 Memory and Mind
- PSYC 355-3 Adolescent Development
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 459-4 Instructional Activities in Physical Education
EDUC 479-4 Designs for Learning: Physical Education
plus two of
EDUC 330-3 Movement Language Elements for Dance in Education
EDUC 457-4 Education and Drama
KIN 342-3 Active Health

Students can include only one Designs for Learning course chosen from the following.

EDUC 412-4 Designs for Learning: Secondary Language Arts
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 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, 8560.1 Education Building, 604.291.3436.

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

Facility 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 Schooling and Society

Notes
• Credits 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 the program, with the exception that duplicate courses are counted only once.
• The certificate program cannot be used in place of the Faculty of Education's professional development program or equivalent as a route to a British Columbia teaching certificate.

Post Baccalaureate Diploma (General)
Contact the Undergraduate Advising Office, 8560.1 Education Building, 604.291.3436.

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 semester 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 197).

Program Requirements
EDUC 322-3 The Social Lives of School Children
EDUC 464-4 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 Development Differences in Language Acquisition
EDUC 326-3 Classroom Management and Discipline
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 registration 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 157.

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 424-4 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 434-4 Philosophical Issues in Education
EDUC 468-4 Cognition and Language in ESL Instruction
GERO 300-3 Introduction to Gerontology
GERO 400-3 Aging and the Built Environment
PSYC 354-4 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

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 280-3 Learning and Teaching Through Technology
Transfer students must complete at least 15 credit hours at Simon Fraser University before applying. Arrangements for work semesters are made through the co-op co-ordinator, who should be consulted at least one semester in advance.

For further details, see "Co-operative Education" on page 231.

Field Programs
8550 Education Building, 604.291.5830 Tel, 604.291.5882 Fax, www.educ.sfu.ca/pd
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 377. 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, 604.291.4326 Tel, 604.291.5691 Fax, www.educ.sfu.ca/pdp/admissions
Director
M. Zola BA (Brist), MEd (Leeds)
Admissions Advisor
Ms. D. Kelso BA (S Fraser), 8624 Education Building, 604.291.3620/3149

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 semesters prior to intended

Simon Fraser University 2006 - 2007 Calendar
registration, 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 semester and May 15 for the spring semester.  
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 fulfil 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 semester 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 semester prior to starting PDP. Secondary applicants are encouraged to have education courses.  

All Applicants  
• A written assignment (described further on the PDP website) is required.  
• A résumé must also be submitted by all applicants (see PDP website for information).  
• Before program consideration, 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 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 semesters in duration. Professional studies and activities are arranged in the following sequence.  

First Semester of Professional Development Program  
EDUC 401-8 Introduction to Classroom Teaching*  
EDUC 402-7 Studies of Educational Theory and Practice*  

*not offered in summer semester  
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 semester 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  
In the fall semester only, 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 semesters. Entry may be competitive.  

EDUC 405-15 Teaching Semester  
(Not offered in summer semester)  

Prerequisites: EDUC 401 and 402  

A semester 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 semester 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 registration procedures before commencing studies in any semester 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 semesters. 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 semester 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 semester; October 15 for spring semester.  

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 semester for which the student applies  

Note: After being withdrawn from EDUC 405 for a second time, 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 semester. 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 semesters 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 17.

• 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 semester; September 15 for the spring semester.

External Professional Development Programs

External Programs Admissions Advisor
Ms. P. Jamieson BA (S Fraser), BEED (Br Col)
8675.3 Education Building, 604.268.6625 tel

There are two external professional development programs that operate under the auspices of a consortium of local community colleges, northern school districts and Simon Fraser University. The consortium invites 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). For information, telephone 1.250.785.6981 local 51 for information.

NWTEC – Northwest Teacher Education Consortium (Terrace,Kitmat, Prince Rupert, Bulkley Valley subject to funding)). For information, telephone 250.635.6511 (local 5378).

Professional Qualification Program (PQP)

This is a three semester (36 credit hour) program leading to a Certificate in Professional Practices for those who wish to recertify 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 semesters prior to their intended registration, 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 Semester

EDUC 352-4 Building on Reflective Practice
EDUC 483-8 Designs for Learning: Curriculum Studies

Second Semester

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 PQP or designate.

Third Semester

EDUC 406-12 Supervised Observation and Teaching

Upon successful completion of the first two semesters, 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 BC_CT’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 not need to complete the second semester 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

Contact the Undergraduate Advising Office, 8625 Education building, 604.291.3488 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 certificate, students must complete, within five years, either the Professional Qualification Program (PQP) requirements for foreign trained teachers (see “Professional Qualification Program (PQP)” on page 200) 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 semesters 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 not attended Simon Fraser University previously, or who have not attended in any of three semesters prior to intended registration 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 604.268.6625).

Application forms for the HEART program should be received by: April 15 for fall semester; September 15 for spring semester. 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 semesters) in applied sciences, arts, business administration, science, or education, plus the professional development program (three semesters). The standard certificate (a minimum of 120 credit hours of academic and professional credit) will normally qualify for Teacher Qualification Service category four.

Notes Regarding Requirements for Teaching Certificates

The following are required for teacher certification.

• a minimum of six Department of English credit hours (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. 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

2812 West Mall Centre, 604.291.4821 Tel, 604.291.5827 Fax, www.fhs.sfu.ca, fhs@sfu.ca

Dean
D.R. MacLean MD (Dal), MA, MHS (Tor)

Associate Deans
M.V. Hayes BA, MSc, PhD (McM), CCFP
C. Janes BA (San Diego), MA (Colorado), PhD (Calif)

Faculty hiring is under way. See www.fhs.sfu.ca for updated information.

Professors
A. Chokalingam BE, MS (ITT, Madras), PhD (Nfld)
K.K. Cook AB (Stan), MPH, MA, PhD (Calif)
C. Janes BA (San Diego), MA (Colorado), PhD (Calif)
E. Goldner BSc (Tor), MD (Calg), MHSc (Br Col)
M. Jeffres BA (LGFAure), MSPhH, PhD (Hawaii)
J.K. Scott AB (Occidental), MD (St Louis), PhD (Missouri), Canada Research Chair

Associate Professors
S. Corber BSc, MD, PhD (McG), DPH (Liv)
M.V. Hayes BA, MSc, PhD (McM)
J. Somers BA (Fraser), MSc, PhD (Wash)
T. Takaro BS (Yale), MD, MPH (N Carolina), MS (Wash)
C. Waddell BSc, MSc (Br Col), MD (McM)

Assistant Professors
M. Forlenza BA (NY), MS (Pitts), MPH (N Carolina), PhD (Pitts)
M. Morrow BA (Br Col), MA, PhD (Tor)
R. Tucker BA (McG), MHS (Tor), 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. Conrado, 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. Haunerland, Biological Sciences
M. Howlett, 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. Lowndes AB, Biological Sciences
C. MacKenzie, Kinesiology
S. MacLean, Political Science
B. McNenery, Statistics and Actuarial Sciences
N. Olevier, Economics
A. Parameswaran, 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

Advisors
Ms. L. Hegland BGS (S Fraser), 2218.2 West Mall Centre, 604.268.7188, hegland@sfu.ca

Undergraduate Degrees Offered
Bachelor of Arts
Bachelor of Arts (Honors)
The Bachelor of Arts 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.

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
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 Perceptions and Misperceptions of Common Health Risks
HSCI 130-3 Foundations of epidemiology
HSCI 140-3 Complementary and Alternative Medicine
HSCI 160-3 Global Perspectives on Health
HSCI 210-4 Cancer
HSCI 211-4 Cardiovascular Disease, Diabetes, Obesity
HSCI 212-4 Infectious Diseases
HSCI 213-4 The Environment and Human Health
KIN 105-3 Fundamentals of Human Structure and Function

and one of
SA 101-4 Introduction to Anthropology
SA 150-4 Introduction to Sociology

and one of
STAT 201-3 Statistics for the Life Sciences
STAT 203-3 Introduction to Statistics for the Social Sciences

Upper Division Requirements
Students complete all of
HSCI 301-3 Foundations of Health Communication and Health Promotion
HSCI 302-3 Evidence-based decision-making in Health
HSCI 320-3 Health Technology – Laboratory Methods
HSCI 321-3 Health Technology – Imaging
HSCI 401-3 Behavior Modification in Health Promotion

Students will also complete a bioethics course, which is currently under development.

Streams
In addition, students must complete the requirements for one of the following streams.

Social Determinants of Health
Students complete all of
HSCI 421-4 Health Survey Methods
HSCI 430-3 Health Problems of Vulnerable Populations

SA 355-4 Quantitative Methods
SA 356-4 Ethnography and Qualitative Methods (SA)

Honors Program
Honors students complete at least 132 credit hours including the major program requirements plus an honors thesis (HSCI 490, 491, and 492) which is based on independent research under the direction of a faculty member. A 3.0 GPA 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 210-4 Cancer
HSCI 211-4 Cardiovascular Disease, Diabetes, Obesity
HSCI 212-4 Infectious Diseases
HSCI 213-4 The Environment and Human Health

Co-operative Education
This will be available by co-operative education once the program is established.
Faculty of Science

P9310 Shrum Science Centre, 604.291.4590 Tel,
604.291.3424 Fax, www.sfu.ca/science

Dean of Science
M. Pilschke BSc (Montr), MPhil (Yale), PhD (Yeshiva)

Associate Dean
R.W. Mathewes BSc (S Fraser), PhD (Br Col)

Director of Science Student Liaison and Alumni Development
J. Simms BSc (New Br), MSc (Wat)

For research interests of faculty members, see "Faculty of Science" on page 313.

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 more information.

Major Program
This program provides a broad education in several fields and some specialization in one field known as the major. Optional programs, which include 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 213 for information.

For more information, see www.sfu.ca/ugradc.

Requirements for Major
Students must complete 120 credit hours including
• minimum of 28 upper division credit hours at the 300 and 400 division as specified by the major program
• additional upper division credit hours to total a minimum of 44 credit hours of upper division credit
• all undergraduate students registering in September 2006 and thereafter are required to fulfill the new curriculum writing, quantitative, and breadth requirements
• 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 37 of the General Regulations section regarding graduation GPA requirements on all course work taken at Simon Fraser University.)

Additional requirements, as specified by the major program and in General Information, may be required and

For students enrolled at the University beginning fall 1991 or later
• upper division grade point average (GPA) and cumulative grade point average (CGPA) as specified in the General Information section of this Calendar or

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

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 which include the following:
• a minimum of 48 hours of upper division credit in one subject area
• additional credit hours of upper division credit bringing the total to a minimum of 60 credit hours of upper division credit
• a minimum of 12 credit hours in subjects taken outside the Faculty of Science (excluding EDUC 401 to 407) including a minimum of six credit hours taken in the Faculty of Arts and Social Sciences
• a program cumulative grade point average (CGPA) minimum of 3.00 must be obtained on the overall course work requirements for the honors program, as well as a minimum program grade point average of 3.00 in the upper division courses required in the honors program. (See "Student Appeals" on page 37 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 program and in the General Information section (see "Honors Program") on 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 etc.) should seek advice from the Academic Resource Office or the Office of the Dean of Science.
• Declaration of major or honors must be officially accepted by that department, prior to the completion of 60 credit hours.
• New students intending to take more than 15 credit hours in their first semester of studies should seek advice from the Academic Resource Office, the Office of the Dean of Science or their major department.
• 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/minor, major/minor, minor/minor) the student may not use the same upper division course for formal credits towards both programs. One course might fulfill content requirements of two related areas, but in such a case additional replacement credits 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 involved.

• Programs totaling more than 18 hours of credit per semester require the approval of the dean.

Minor Program
Consult advisors in appropriate departments when deciding on course selection. Suggested courses and prerequisites are given in each department's Calendar entry. An average grade of at least 2.00 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 general education in several fields with some specialization in at least two fields. 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 213), 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 231. 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 an Simon Fraser University bachelor of science degree after successful completion of the first year of professional study. To be acceptable, courses taken in the professional program must not duplicate courses 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 graduation should be delayed until the summer semester following the completion of requirements.

Faculty of Dentistry at the University of British Columbia requires the following courses which are prerequisites for applying to enter the first year of dentistry (DMD).

ENGL 199 and one of 101 or 102 or 103 or 104 or 105

MBB 222 and 321, or 222 and 322

BISC 101 and 102

CHEM 121, 122, 126, 281, 282, 286

MATH 154 and 155, or 157 and 158, or 151 and 152, or 161 and 162

PHYS (101, 102, 130) or (120, 121, 131)

Additional courses are required to complete six semesters (90 UBC credit hours). These should be chosen in accordance with a specific Simon Fraser University degree program but students are advised to select some courses from disciplines in the humanities and social sciences.

Contact address
For student admissions: Faculty of Dentistry – Student Services, University of British Columbia, 278 – 2199 Westbrook Mall, Vancouver, BC, V6T 1Z3. Telephone 604.822.8063, Fax 604.822.8279, foddams@interchange.ubc.ca, www.dentistry.ubc.ca

Faculty of Forestry at the University of BC
The Faculty of Forestry offers four year degree programs in forest science, natural resources conservation, forest resources management, forest operations and wood products processing. The curricula allows two admission pathways: one from high school; or following a year of science at the University of BC, or its equivalent at another post-secondary institution. If first year science is taken at Simon Fraser University, the following courses are recommended.

ENGL one of 101 or 102 or 103 or 105 or 199

BISC 101 and 102

CHEM 111 and 102 or PHYS 100 or 101

MATH 154 and 155, or 157 and 158, or 151 and 152

ECON 103 and 105

STAT 270

Students who apply to the Faculty of Forestry after one year of post-secondary education must complete an additional three or four years to fulfill the degree requirements, depending on the forestry program chosen.

Contact address
Student Services Centre, Faculty of Forestry, University of British Columbia, Forest Science Centre, FSC 2609, 2424 Main Mall, Vancouver, BC, V6T 1Z4. Telephone 604.822.1834, toll free 1.888.933.9663, forest.info@ubc.ca, www.forest.ubc.ca

Faculty of Medicine at the University of British Columbia requires the following courses which are prerequisites for applying to enter the first year of medicine.

English: any two of ENGL 101, 102, 103, 104, 199 (199 recommended)

Chemistry: all of CHEM 121, 122, 126, 281, 282, 286

Biochemistry: both MBB 222 and 321 (MBB 221 is a prerequisite for 222)

Biology: both of BISC 101 and 102

Official admission requirements are defined in the UBC School of Medicine Calendar and may be subject to change.

Applicants are notified of admissions decisions in May but the number of qualified applicants significantly exceeds the number of available positions. Students planning to enter medicine after the sixth level (after completing 90 credit hours) should arrange their program so that in the event they are not accepted into medical school, they can complete their major program at Simon Fraser in a timely fashion. Writing the MCAT is a necessary step for possible admission to medical school.

Contact address
Admissions office: Faculty of Medicine, University of British Columbia, 317 – 2194 Health Sciences Mall, Vancouver, BC, V6T 1Z3. Telephone 604.822.4482, admissions.md@ubc.ca, www.med.ubc.ca

Faculty of Pharmaceutical Sciences at the University of British Columbia requires the following courses which are prerequisites for applying to enter the first year of a four year program of pharmacy.

BISC 101and 102

CHEM 121 / 122 / 126

MATH 151 / 152 (or 154 or 155 or 157 or 158)

PHYS 101 / 102 / 130 (or 120 / 121 / 131)

Refer to a current University of British Columbia Calendar for specific information. All applicants must submit additional supplemental admission requirements. Students should consult the Faculty of Pharmaceutical Sciences at the University of BC.

Contact address

Western College of Veterinary Medicine at the University of Saskatchewan, Saskatoon, requires the following courses as prerequisites for applying to enter this program.

ENGL any two of 101, 102, 103 or 104

MBB 221 and 222

BISC 101, 102, 202, 303

CHEM 121, 122, 126, 281, 282, 286

MATH 151, 152 (or 154, 155 or 157, 158) STAT 201 may be substituted for MATH 152, or 155 or 158

PHYS 101, 102, 130 (or 120, 121, 131)

Electives 15 credit hours

Electives should be selected on the basis in which the student is enrolled, and may include non-science related subjects. Students are encouraged to choose electives that broaden perspectives. The electives should not include courses which are equivalent to BC high school grade 12, or which are general education courses at the 000 division.

Contact address
Admission Office, Western College of Veterinary Medicine, University of Saskatchewan, S2 Campus Drive, Saskatoon, Saskatchewan, S7N 5B4

General Note
All course requirements should be completed by the end of the spring semester preceding the proposed date of entry to a professional school.

The Western College of Veterinary Medicine requires a minimum 70% cumulative average for veterinary program admission. Grades are converted to a common scale for comparative purposes and this converted average will be used.

The college has recently, with Saskatchewan Human Resources Commission approval, introduced an Educational Equity Program for Aboriginal students. A defined number of seats have been allocated for self-identified Aboriginal descent applicants who will be ranked among themselves and not against the general applicant pool. Proof of Aboriginal ancestry is required and must be provided at the time of application. For the purpose of admission the accepted document for Aboriginal ancestry proof are in the University of Saskatchewan Calendar.

Laboratory Exercises

204 Faculty of Science – Department of Biological Sciences

Department of Biological Sciences

B8255 Shrum Science Centre, 604.291.4475 Tel, 604.291.3496 Fax, www.sfu.ca/biology

Chair
T.D. Williams BSc (Exe), PhD (Brist)

Professors Emeriti
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F. Cooke BA, MA, PhD (Camb)
L.D. Druehl BSc (Wash State), MSc (Wash), PhD (Br Col)
T. Finlayson BA (Tor), LLD (S Fraser)
F.J.F. Fisher BSc, MSc (Cant), PhD (NZ)
J.P.M. Mackauer DrPhilNat (Fran), FESC
B.A. McKeeown BSc (Br Col), PhD (S Fraser)
J.E. Rahe BSA, PhD (Purdue)
L.M. Srivastava BSc, MSc (Ald), PhD (Calif)
A.L. Turnbull BSF, MF (Br Col), DPhil (Oxf)
N.A.M. Verbeek BSc (Br Col), MSc (Montre), PhD (Calif)
W.E. Vidaver AB (San Francisco), PhD (Stan)
J.M. Webster BSc, DSc, PhD (Lond), ARCS, DIC

Professors
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A.T. Beckenbach BSc (Florida Presbyterian), MSc (Flor), PhD (Calif)
L.I. Bendell-Young BSc, PhD (Tor)
I.M. Coté BSc (McG), MSc (Alta), PhD (Tor)
B.J. Crespi BSc (Chic), PhD (Mich)
L.M. Dill BSc, MSc, PhD (Br Col)
G.L. Gries Diplom (Göt), NSERC Industrial Research Chair
A.S. Harestad BSc, MSc, PhD (Br Col)
N.H. Haunerland Diplom, PhD (München)
A.R. Kermode BSc, PhD (Calif)
F.C.P. Law BSc, MSc (Alta), PhD (Mich)
R.W. Mathewes BSc (Fraser), PhD (Br Col)
M.M. Moore BSc, PhD (Br Col)
Z.K. Punja BSc (Br Col), MS, PhD (Calif), Burnaby

Mountain Endowed Chair
D. Reynolds BSc (Tor), MSc (Qu), PhD (Tor), Tom Buell BC Leadership Chair in Salmon Conservation and Management

B.D. Rolofberg BSc (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 (Fraser), DPhil (Oxf)

Associate Professors
F. Breeden BA (Florida), MS (Georgia), PhD (Chic)
M.W. Hart BSc (Alta), MSc (Dal), PhD (Wash)
E.B. Hartwick BSc, MSc (Tor), PhD (Br Col)
H. Hutter BSc (L. Maximilians), PhD (M. Planck Inst)
C.J. Kennedy BSc, PhD (S Fraser)
L.F.W. Lesak BSc (Man), PhD (Calif)*
R.A. Nicholson BSc, PhD (S'Ton)
A.L. Plant BSc, PhD (Nott)

Assistant Professors
S.R. Bigrorse BSc (Vic, BC), MSc (Indiana), PhD (Utah)
J.K. Christians BSc (Trent), PhD (S Fraser)
E. Elle BSc, MA (New York), PhD (Rutgers)
D.J. Green BSc (Sus), MSc (S Fraser), PhD (ANU)
C.A. Lowenberger BSc (Guelph), MPM (S Fraser), PhD (McG), Canada Research Chair
J. Mattsson BSc, PhD (Uppsala)
A.R. Mooers BSc (McG), DPhil (Oxf)
I. Novales Flamarique BSc (McG), MSc, PhD (Vic, BC)
E. Palsson, CandMag (Oslo), MA, PhD (Prin)
G.L. Rintoul BSc (W Ont), PhD (Br Col)
M.A. Silverman, BSc (N Illinois) PhD (Denver)
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 credits in other BSC 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

Basic credit hour requirements underlying all areas of emphasis follow.

**BISC/MBB (lower division)**
- 20 credit hours

**BISP/CMBB (upper division)**
- 27 credit hours

*electives
- 36 credit hours

*total (minimum)
- 120 credit hours

*see “Requirements for Major” on page 203

Six credit hours of English should be completed by all major/honor students in biological sciences.

#### Lower Division Core

Normally all biological sciences majors must complete the following, or equivalents, within the first 60 hours (four semesters) of their programs.

**Courses in the Faculty of Science**
- **all of** BISC 101-4 Introduction to Biology
- BISC 102-4 Introduction to Biology
- BISC 202-3 Genetics
- BISC 204-3 Introduction to Ecology
- CHEM 121-4 General Chemistry and Laboratory I
- CHEM 122-2 General Chemistry II
- CHEM 281-4 Organic Chemistry and Laboratory I
- CHEM 282-2 Organic Chemistry II
- MBB 221-3 Cell Biology and Biochemistry
- MBB 222-3 Molecular Biology and Biochemistry
- statically for the Life Sciences
- 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 155-3 Calculus II for the Biological Sciences
- and one of
- PHYS 102-3 General Physics I
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 125-3 Mechanics and Special Relativity
- and one of
- PHYS 102-3 General Physics II
- PHYS 121-3 Optics, Electricity and Magnetism
- PHYS 126-3 Electricity, Magnetism and Light

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 BSC major/honor students.

**BISC 300-3 Evolution**
**BISC 333-3 Developmental Biology**

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 web page for advice on other areas of specialization). The course requirements for each stream are as follows.

#### Cell and Molecular Biology

Students must complete one physiology course from

- BISC 305-3 Animal Physiology
- BISC 366-3 Plant Physiology

and one organ-lab course from

- BISC 303-3 Microbiology
- BISC 306-3 Invertebrate Biology
- BISC 316-3 Vertebrate Biology
- BISC 326-3 Biology of Algae and Fungi
- BISC 337-3 Plant Biology

plus five stream specific courses from the following

- BISC 302-3 Genetic Analysis
- BISC 303-3 Microbiology
- BISC 403-3 Current Topics in Cell Biology
- BISC 405-3 Cell Physiology
- BISC 429-3 Separation Methods
- BISC 439-3 Industrial Microbiology
- BISC 449-3 Histology
- BISC 457-3 Plant Molecular Biology and Biotechnology
- BISC 498-3 Undergraduate Research I
- BISC 499-3 Undergraduate Research II
- MBB 308-3 Molecular Biology and Biochemistry
- Laboratory I
- MBB 322-3 Molecular Biology
- 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 either BISC 498 or 499) among their upper division courses.

#### Integrative Biology

Students must complete one physiology course from

- BISC 305-3 Animal Physiology
- BISC 366-3 Plant Physiology

plus one organ-lab course from

- BISC 303-3 Microbiology
- BISC 306-3 Invertebrate Biology
- BISC 316-3 Vertebrate Biology
- BISC 326-3 Biology of Algae and Fungi
- MBB 337-3 Plant Biology
- BISC 307-3 Animal Physiology
- BISC 307-3 Animal Physiology
- BISC 367-3 Plant Physiology

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 416-3 Fish Biology
- BISC 432-3 Chemical Pesticides and the Environment
- BISC 439-3 Industrial Microbiology
- BISC 449-3 Environmental Physiology of Animals
- BISC 455-3 Endocrinology
- BISC 457-3 Plant Molecular Biology and Biotechnology
- BISC 498-3 Undergraduate Research I
- BISC 499-3 Undergraduate Research II
- MBB 321-3 Intermediary Metabolism
- MBB 332-3 Molecular Biology

*recommended

plus three electives (nine credit hours) chosen from any upper division undergraduate BISC or MASC course 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 either BISC 498 or 499) among their upper division courses.

Ecology and Evolution
Students must complete one physiology course from BISC 204-3 Animal Physiology BISC 366-3 Plant Physiology plus one organism lab course from BISC 303-3 Microbiology BISC 306-3 Invertebrate Biology BISC 316-3 Vertebrate Biology BISC 326-3 Biology of Algae and Fungi BISC 337-3 Plant Biology plus five stream specific courses from the following BISC 304-3 Animal Ecology* BISC 310-3 Natural History of British Columbia BISC 316-3 Vertebrate Biology BISC 317-3 Insect Biology BISC 404-3 Plant Ecology* 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 430-3 Plant Pathology BISC 434-3 Paleocology and Palynology BISC 435-3 Introduction to Pest Management BISC 440-3 Biodiversity BISC 441-3 Evolution of Health and Disease 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 either BISC 498 or 499) among their upper division courses.

Open Stream
Students must complete one physiology course from BISC 305-3 Animal Physiology BISC 366-3 Plant Physiology plus one organism lab course from BISC 303-3 Microbiology BISC 306-3 Invertebrate Biology BISC 316-3 Vertebrate Biology BISC 326-3 Biology of Algae and Fungi BISC 337-3 Plant Biology plus 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 program advisor. Students must complete five lab courses (which may include either BISC 498 or 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 semesters.

Semester 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

Semester 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

Semester 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

Semester 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 semesters).

Honors Program
Entry requires a CGPA 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 492, 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 MBB 222-3 Molecular 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

Upper Division Requirements

- plus two of BISC 445-3 Environmental Physiology of Animals (prerequisite BISC 305) CHEM 371-3 Chemistry of the Aquous 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 323.

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 MATH 154-3 Calculus I for the Biological Sciences MATH 155-3 Calculus II for the Biological Sciences 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

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 326 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. Consult the department in January for course, and for 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 Department of Biological Sciences. 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). MASC courses are offered at the Bamfield Marine Sciences Centre (see page 417 for a list of courses). MASC course offerings may vary 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 should consult the brochure published each fall by the Bamfield Marine Sciences Centre for full details. The brochure will be available from the Department of Biological Sciences. From time to time graduate level courses will be offered. For information, see “Department of Biological Sciences” on page 313.

Students from other Departments
Those not enrolled in biological sciences programs may take BISC 100, 101, 102. Admission to certain other courses is by permission of the department.

Co-operative Education Program
 Majors and honors students may apply for co-op education which includes four work semesters during the academic program. See www.sfu.ca/coop/science or contact the science co-op co-ordinators in room 8101 South Science Building, 604.291.5934.

Department of Chemistry
C8035 Shrum Science Centre, 604.291.3590 Tel, 604.291.3765 Fax, www.sfu.ca/chemistry

Chair  
A.J. Bennet BSc, PhD (Brist), FCIC

Professors Ementi  
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T.N. Bell BSc, PhD (Durf)
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J.M. D’Auria BSc (New Zealand), MSc, PhD (Yale)
F.W.B. Einstein BSc (New Zealand), MSc, PhD (Can), FCIC
L. Furt BSc, MSc (Dal), PhD (McG), FCIC
I.D. Gay BSc, MSc (Dal), PhD (Lond)
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K.N. Slessor BSc, PhD (Br Col)
D. Sutton BSc, PhD (Nott)
E.M. Voigt BSc, MSc (McM), PhD (Br Col)
J. Walkley BSc, PhD (Liv), FCIC
S. Wolfe BA, MA (Tok), PhD (Ott), FCIC, FRSC

Professor  
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R.B. Cornell BS (Houghton), PhD (Penn)*
R. Hill BSc, PhD (Water), FCIC
S. Holdcroft BSc (Salif), PhD (S Fraser), FCIC
C.H.W. Jones BSc, PhD (Manc)

P.W. Percival BA, MA, DPhil (Oxf), FCIC
B.M. Pinto Bsc, PhD (Qu), FCIC, FRSC
R.K. Pomeroy BSc (Lond), PhD (Alta)*
D. Sen BA (Camb), MPhil, PhD (Yale)*
Z.G. Ve 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. Lenzoff Bsc (York, Can), PhD (Br Col)
E. Plettner Bsc, Msc (S Fraser)
J.J. Wilkie BSc, MSc, PhD (Tor)
P.D. Wilson BSc (Newcastle, UK), MSc, PhD (Manc)
H.Z. Yu BSc, MSc (Shandong), PhD (Peking)

Assistant Professors  
R.A. Britton BSc (Wat), PhD Br Col)
M.H. Eikeler BSc (Aschen Tech), PhD (Munich Tech)
B.D. Gates BS (W Wash), MS, PhD (Wash), Canada Research Chair
M.A. O’Neill BSc, PhD (Dul)
J.J. Ressler BS (Minn), PhD (Maryland)
D.J. Vociadoc BSc, PhD (Br Col), Canada Research Chair
C.J. Walsby BSc, PhD (Can)
V. Williams BSc, PhD (Qu)

Adjunct Faculty  
T.J. Borgford Bsc, PhD (Manit)*
P.D. Brown Bsc (S Nazarene), MSc, PhD (Idaho)
L.R. Dalton BS, MS, (Mich), PhD (Harvard)
M.C. Friesen BS, BSE (J Brown), PhD (Alabama)
M.J. Gresser BA, PhD (Brandies)
A.R. Lewis BSc, MSc (Auck), PhD (Br Col)
C.D. Montgomery BSc, MSc, PhD (WOn)
T.J. Ruth Bsc, PhD (Clark)
L.E. Sojo, BSc, PhD (C’dia)
A.S. Tracey BSc (S Fraser)
N.N. Weinberg MSc (Moscow State, PhD (Acad Science Moscow)
P. Wilkinson Bacs (Br Col), PhD (Ott)

Associate Members  
J.L. Bechhoefer, Physics
D.H. Boal, Physics
N.R. Forde, Physics
G.J. Gries, Biological Sciences
K.L. Kavanagh, Physics

Senior Lecturers  
R.J. Batchelor BSc (Br Col), PhD (McM)
J.C. Brodovitch BSc (Pasteur, Stras), 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 (Calig)
S.M. Lavieri BSc (Metropol, Venezuela), MSc (Venezuela), PhD (Central de Venezula)
R. Mund BSc (Br Col), PhD (S Fraser)

*joint appointment with biochemistry

Advisor  
Dr. K.S. MacFarlane Bsc, MSc, PhD (Br Col), C8049

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 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 339 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 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 286-2 Organic Chemistry Laboratory II
MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 233-2 Elementary Linear Algebra
MATH 251-3 Calculus III
PHYS 120-3 Mechanics and Modern Physics
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 131-2 Physics Laboratory I

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 360-3 Thermodynamics and Chemical Kinetics
CHEM 366-2 Physical Chemistry Laboratory
CHEM 380-3 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.

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Electives (43 credit hours)

- In addition to the above, students must complete
  - 12 elective credit hours at any level in subjects outside the Faculty of Science (excluding EDUC 401-407), including six credit hours from the Faculty of Arts and Social Sciences
  - upper division courses chosen from any faculty (but excluding EDUC 401-407) to bring the total to a minimum of 44 upper division credit hours
  - free electives at any level from any faculty to provide 120 credit hours required for the degree.

Students specializing in physical or theoretical chemistry should take more mathematics and physics courses than specified above and a course in computer programming.

Typical Course Sequence

The following is a typical course sequence for the first four semesters. Variations are possible.

Semester 1
- CHEM 121-4 General Chemistry and Laboratory I
- MATH 151-3 Calculus I
- PHYS 120-3 Mechanics and Modern Physics electives

Semester 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

Semester 3
- CHEM 230-3 Inorganic Chemistry
- CHEM 236-3 Inorganic Chemistry Laboratory
- CHEM 281-4 Organic Chemistry I
- MATH 232-3 Elementary Linear Algebra elective

Semester 4
- CHEM 215-4 Introduction to Analytical Chemistry
- CHEM 260-4 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 (54 credit hours)

- 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 260-4 Atoms, Molecules, Spectroscopy
- CHEM 281-4 Organic Chemistry I
- CHEM 282-2 Organic Chemistry II
- CHEM 286-2 Organic Chemistry Laboratory II
- MATH 151-3 Calculus I
- MATH 152-3 Calculus II
- MATH 232-3 Elementary Linear Algebra
- MATH 251-3 Calculus III
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 121-3 Optics, Electricity and Magnetism
- PHYS 131-2 Physics Laboratory I
- PHYS 231-3 Intermediate Mechanics
- PHYS 233-2 Introductory Physics Laboratory III

Upper Division Requirements (48 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 Radiophysics and one of:
  - CHEM 460-3 Advanced Physical Chemistry
  - CHEM 464-3 Quantum Chemistry
- 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 (30 credit hours)

- 12 elective credit hours at any level in subjects outside the Faculty of Science (excluding EDUC 401-407), including six credit hours from the Faculty of Arts and Social Sciences.
- upper division courses chosen from any faculty (but excluding EDUC 401-407) to bring the total to a minimum of 60 upper division credit hours
- free electives at any level from any faculty to provide the minimum 132 credit hours required.

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 major-minor regulations. For a chemistry minor, students must complete a minimum of 14 upper division credit hours in chemistry, biochemistry or nuclear science (including a minimum of eight credit hours in chemistry, and excluding undergraduate research courses), together with all the 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 371-2 Analytical Environmental Chemistry
- CHEM 371-3 Chemistry of the Aquous Environment
- CHEM 372-3 Chemistry of the Atmospheric Environment
- CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
- CHEM 415-3 Selected Topics in Analytical Chemistry
- NUSC 341-3 Introduction to Radiophysics

*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 341-3 Introduction to Radiochemistry
- NUSC 342-3 Introduction to Nuclear Science
- 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 219.

Chemical Physics

See “Chemical Physics Major Program” on page 223.

Co-operative Education

D. Bartlett, co-op co-ordinator, Faculty of Science, 604.291.4694

This program combines work experience with academic studies. The student spends alternate semesters on campus and in study related jobs. A major and honors program leading to a BSc degree, and a co-op education program incorporating four work semesters are available in chemistry and related areas. The work practicum requirements are CHEM 306, 307, 406 and 407. Application is at least three months prior to the semester’s start in which the student takes CHEM 306. Seek department advice as early as possible. A minimum 2.67 CGPA is required to enrol and continue in the major in co-op. Higher averages are required for entry to and continuance in an honors program in co-operative education. See “Co-operative Education” on page 231.

Department of Earth Sciences

7201 Technology and Science Complex I, 604.291.5387 Tel, 604.291.4198 Fax, www.sfu.ca/earth-sciences

Chair

D.J. Thorkelson BSc, MSc (Br Col), PhD (Car)

Professor Emeritus

M.C. Roberts BSc (Lond), MA (Tor), PhD (Iowa), PGeo

Professors

J.J. Clague BA (Occidental), MSc (Calif, PhD (Br Col), PGeo, Canada Research Chair in Natural Hazards Associate Professors

D.M. Allen BSc, MSc, PhD (Car), PGeo

A.J. Calvert BA (Oxf), PhD (Camb)

J.A. MacEchern BSc, MSc (Regina), PhD (Alta)

D. Marshall BSc, MSc (Car), DSc (Lausanne)

M. S. Mustard BSc (Calg), MSc, PhD (Car), PGeo

D. Stead BSc (Exe), MSc (Leeds), PhD (Nott), CEng, Forest Renewal BC Chair in Terrain Analysis and Forest Geoscience

J.D. Thorkelson BSc, MSc (Br Col), PhD (Car)

B.C. Ward BSc, PhD (Alta)

Assistant Professors

G. Flowers BA (Colorado), PhD (Br Col), Canada Research Chair in Glaciology

H.D. Gibson, BSc (Colgate), MSc, PhD (Car)

G. Williams-Jones BSc, MSc (Montr), PhD (Open, UK)
Upper Division Requirements

Students must complete a minimum of 39 credit hours including the following 21 required credit hours:

- EASC 301-3 Igneous and Metamorphic Petrology
- EASC 302-3 Sedimentary Petrology
- EASC 303-3 Environmental Geoscience
- EASC 304-3 Hydrogeology
- EASC 306-3 Field Geology II
- EASC 309-3 Global Tectonics
- EASC 310-3 Paleontology
- EASC 406-3 Field Methods in Hydrogeology
- EASC 416-3 Field Methods 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 422-3 Structural Geology I
- EASC 430-3 Field Geology III
- EASC 435-3 Regional Geology of Western Canada
- EASC 439-3 Rivers: Environments & Engineering
- EASC 440-3 Groundwater Geochemistry and Contaminant Transport
- EASC 441-3 Terrain Analysis
- EASC 442-3 Advanced Geochemistry
- EASC 443-3 Resource Geotechnics
- EASC 445-3 Field Techniques in Hydrogeology
- EASC 467-3 Seismology

Students must complete one of:

- GEOG 313-3 Geomorphology
- GEOG 314-3 Geomorphology II
- EASC 401-3 Mineral Deposits
- EASC 402-3 Sedimentology
- EASC 403-3 Quaternary Geology
- EASC 404-3 Structural Geology II
- EASC 405-3 Field Geology III
- EASC 406-3 Field Geology I
- EASC 408-3 Regional Geology of Western Canada
- EASC 409-3 Rivers: Environments & Engineering
- EASC 410-3 Groundwater Geochemistry and Contaminant Transport
- EASC 411-3 Terrain Analysis
- EASC 412-3 Advanced 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 422-3 Structural Geology I
- EASC 430-3 Field Geology III
- EASC 435-3 Regional Geology of Western Canada
- EASC 439-3 Rivers: Environments & Engineering
- EASC 440-3 Groundwater Geochemistry and Contaminant Transport
- EASC 441-3 Terrain Analysis
- EASC 442-3 Advanced Geochemistry
- EASC 443-3 Resource Geotechnics
- EASC 445-3 Field Techniques in Hydrogeology
- EASC 467-3 Seismology

Other Requirements

Students must also complete six additional upper division credit hours in the Faculty of Science or physical geography courses, or related courses approved by the department. Students who intend to apply for registration with APEGBC may be required to complete additional courses that are not required for the major. Seek advice from the department.

Honor 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 CGPA, and permission of the department. This program has the same requirements as the major except for the following additional requirements:

- maintenance of a minimum GPA of 3.00
- 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 considering career goals.

Minor Program

Students must complete the following:

EASC 101-3 Physical Geology

and at least three of:

EASC 201-3 Stratigraphy and Sedimentation
EASC 202-3 Introduction to Mineralogy
EASC 204-3 Structural Geology
EASC 205-3 Introduction to Petrology
EASC 207-3 Introduction to Applied Geophysics
EASC 208-3 Introduction to Geochemistry

plus 14 credit hours in any 300 and 400 division EASC courses excluding EASC 491, 492, 493 and 499.

Certificate in Forestry Geoscience

This program provides an opportunity to obtain a specialization in geoscience courses having direct relevance to forestry industry careers. It is directed, in the first place, to undergraduate taking a major in earth sciences or physical geography. Credits applied to 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

Elective Courses

Students must complete one of:

EASC 304-3 Hydrogeology

and one of:

EASC 403-3 Quaternary Geology
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

Co-operative Education

Co-operative education, combining relevant work experience with academic studies in alternate semesters on campus and in study related employment, includes pre-employment orientation and four full-time paid work semesters. Co-operative education is available to qualified earth sciences students and honors students.

To enrol, students should attend the co-op information meetings held in the first two weeks of the semester prior to the semester 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
Environmental Science Program
www.sfu.ca/envsci
Program Director
A.S. Harestad BSc, MSc, PhD (Br Col), Department of Biological Sciences, 8153 South Science Building, 604.291.4387 Tel, 604.291.3772 Fax, richard_harestad@sfu.ca
Advisor
Ms. R. Hotell, faculty assistant, Faculty of Science, P9316 Shrum Science Centre, 604.291.3772 Tel, 604.291.3424 Fax, hotell@sfu.ca
Subject Advisors
Dr. G. Agnes, Department of Chemistry, 7102 South Science Building, 604.291.4387 Tel, 604.291.3765 Fax, richard_harestad@sfu.ca
Dr. G. Williams-Jones, Department of Earth Sciences, TASC 1-7201, 604.291.3306 Tel, 604.291.4198 Fax, gagnes@sfu.ca
Dr. D. Elle, Department of Biological Sciences, B8230 Shrum Science Centre, 604.291.4592 Tel, 604.291.3496 Fax, elle@sfu.ca
Dr. M. Chen, Department of Physics, P9442 Shrum Science Centre, 604.291.4244 Tel, 604.291.5786 Fax, maro@sfu.ca
Dr. L.F. W. Lesack, Department of Geography, 7225 Science Centre, 604.291.5786 Tel, 604.291.5786 Fax, lance_lesack@sfu.ca
Dr. E. Elle, Department of Statistics and Actuarial Science, 10537 Shrum Science Centre, 604.291.4244 Tel, 604.291.5786 Fax, eelle@sfu.ca
Dr. R. Routledge, Department of Statistics and Actuarial Science, 10537 Shrum Science Centre, 604.291.4478 Tel, 604.291.4947, richard_routledge@sfu.ca
This program provides a broad education with specialization in one of six areas of emphasis: biology, chemistry, environmetrics, 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
This program requires 120 credit hours including at least 44 in courses numbered 300 and above, and a minimum of 12 credit hours from outside the Faculty of Science. 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 122-2 General Chemistry II
CHEM 126-2 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

Year Two
BISC 204-3 Introduction to Ecology
CHEM 214-4 Introduction to Analytical Chemistry
CHEM 230-3 Inorganic Chemistry
CHEM 281-4 Organic Chemistry I
EVSC 200-3 Introduction to Environmental Science
GEOG 111-3 Physical Geography
MBB 221-3 Cellular Biology and Biochemistry
and one of
STAT 201-3 Statistics for the Life Sciences
PHYS 121-3 Optics, Electricity and Magnetism

Year Three
BISC 304-3 Animal Ecology
BISC 305-3 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 Biogeochemistry
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 491-3 Advanced Field Studies in Environmental Science
Plant Biology
BISC 310-3 The Natural History of British Columbia
BISC 326-3 Biology of Algae 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

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 236-3 Inorganic Chemistry Laboratory
CHEM 282-2 Organic Chemistry II
CHEM 360-3 Thermodynamics and Chemical Kinetics
CHEM 316-4 Introductory Instrumental Analysis
CHEM 371-3 Chemistry of the Aqueous Environment
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
STAT 302-3 Analysis of Experimental and Observational Data

Year Four
BISC 312-3 Environmental Toxicology I
CHEM 317-2 Analytical Environmental Chemistry
CHEM 332-3 Chemistry of the Transition Metals
CHEM 372-3 Chemistry of the Atmospheric Environment
EVSC 401-1 Current Topics in Environmental Science
PHYS 346-3 Energy and the Environment
STAT 403-3 Intermediate Sampling and Experimental Design
and at least 18 credit hours from the following courses to be completed in years three or four.
BISC 305-3 Animal Physiology
BISC 414-3 Limnology
CHEM 380-4 Chemical and Instrumental Methods of Identification of Organic Compounds
CHEM 460-3 Advanced Physical Chemistry
EVSC 491-3 Advanced Field Studies in Environmental Science
CHEM 461-4 Ecosystem Biogeochemistry
GEOG 316-4 Ecosystem Biogeochemistry
GEOG 371-4 Soil Science
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.

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.

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.

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.
CHEM 371-3 Chemistry of the Aqueous Environment
ECON 103-3 Principles of Microeconomics
ECON 105-3 Principles of Macroeconomics
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III
STAT 285-3 Intermediate Probability and Statistics
STAT 350-3 Linear Models in Applied Statistics

Year Four
CHEM 317-2 Analytical Environmental Chemistry
EVSC 401-1 Current Topics in Environmental Science
PHYS 346-3 Energy and the Environment
REM 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 three courses from the following to be completed in years three or four.

Suggested Groupings of Courses

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
BISC 414-3 Limnology
CHEM 372-3 Chemistry of the Atmospheric Environment
EVSC 491-3 Advanced Field Studies in Environmental Science
GEOG 214-3 Climatology I
GEOG 316-4 Ecosystem Biogeochecmistry
GEOG 354-4 Introduction to Geographic Information Systems
REM 311-3 Applied Ecology and Sustainable Environments
REM 336-3 Management Institutions
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment and Management of Hazardous Substances
REM 471-3 Forest Ecosystem Management

Aqueous Chemistry Focus
BISC 314-3 Limnology
GEOG 311-4 Hydrology I
GEOG 316-4 Ecosystem Biogeochecmistry
REM 311-3 Applied Ecology and Sustainable Environments
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment

Atmospheric Focus
CHEM 372-3 Chemistry of the Atmospheric Environment
GEOG 214-3 Climatology I
REM 311-3 Applied Ecology and Sustainable Environments
REM 412-3 Environmental Modelling

Toxic Materials Focus
BISC 312-3 Environmental Toxicology I
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

Physical Geography

Years One and Two
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 126-2 General Chemistry Laboratory II
REM 100-3 Global Change
GEOG 111-3 Physical Geography
GEOG 213-3 Geomorphology I
GEOG 214-3 Geomorphology II
EVSC 200-3 Introduction to Environmental Science

and one of
MATH 151-3 Calculus I
MATH 154-3 Calculus I for Biological Sciences
MATH 157-3 Calculus I for Social Sciences
and one of
MATH 152-3 Calculus II
MATH 155-3 Calculus II for Biological Sciences
MATH 158-3 Calculus II for Social Sciences

and one of
PHYS 101-3 General Physics I
PHYS 120-3 Mechanics and Modern Physics
PHYS 121-3 Optics, Electricity and Magnetism
and one of
BISC 204-3 Introduction to Ecology
GEOG 215-3 Biogeography
and one of
STAT 201-3 Statistics for the Life Sciences
STAT 270-3 Introduction to Probability and Statistics

Eight credit hours of electives Total 60 credit hours

Year Two
BISC 102-4 General Biology
CHEM 122-2 General Chemistry Laboratory
CHEM 317-3 Chemistry of the Aqueous Environment
BISC 366-3 Plant Physiology
BISC 367-3 Plant Physiology Laboratory
BISC 367-3 Plant Physiology Laboratory I
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment
REM 471-3 Forest Ecosystem Management
and one of
CHEM 371-3 Chemistry of the Aqueous Environment

Simulation of Contaminant Transport*

Suggested Groupings of Courses

Three groupings of courses are identified below to aid students in their choice of electives.

Aquatic Environments
BISC 414-3 Limnology
GEOG 314-3 Climatology II
GEOG 315-4 Regional Ecosystems
BISC 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II
REM 471-4 Forest Ecosystem Management
Biologychemistry
GEOG 414-3 Limnology
CHEM 371-3 Chemistry of the Aqueous Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 304-3 Hydrogeology
EASC 410-3 Groundwater Geochemistry and Contaminant Transport
GEOG 417-4 Soil Science II

Pollutant Transport

Year One
BISC 101-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
EASC 103-3 Chemistry of the Aqueous Environment
EASC 105-3 Principles of Macroeconomics
EVSC 401-1 Current Topics in Environmental Science
GEOG 311-4 Hydrology I
GEOG 316-4 Ecosystem Biogeochecmistry
GEOG 317-4 Soil Science 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
and 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 434-3 Paleocology and Palynology
GEOG 314-3 Climatology II
GEOG 315-4 Regional Ecosystems
EASC 415-4 Advanced Biogeography
GEOG 417-4 Soil Science II

*requires prerequisites to be taken as electives

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and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism*
*recommended

Year Two
CHEM 281-4 Organic Chemistry I
EASC 201-3 Stratigraphy and Sedimentation
EASC 209-1 Field Geology I
EVSC 200-3 Introduction to Environmental Science
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 Programming I
CMPT 102-3 Introduction to Scientific Computer Programming*

Years Three and Four
BISC 102-4 General Biology
EASC 202-3 Mineralogy
EASC 304-3 Hydrogeology
EASC 410-3 Groundwater Geochemistry and Contaminant Transport
EVSC 401-1 Current Topics in Environmental Science
MATH 252-3 Vector Calculus
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 314-3 Boundary Value Problems
STAT 285-3 Intermediate Probability and Statistics

and one of
GEOG 213-4 Climatology I
GEOG 213-3 Geomorphology I

BISC 204-3 Introduction to Ecology
GEOS 230-3 Biogeography

and at least 24 upper division credit hours of electives selected from the following. Note that some courses may require lower division prerequisites.
BISC 312-3 Environmental Toxicology I
BISC 414-3 Limnology
CHEM 316-4 Introductory Instrumental Analysis
CHEM 317-3 Analytical Environmental Geochemistry
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aqueous Environment
CHEM 372-3 Chemistry of the Atmospheric Environment
EASC 303-3 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 493-3 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 415-4 Advanced Biogeography
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
STAT 403-3 Intermediate Sampling and Experimental Design

and at least 12 credit hours selected from outside the Faculty of Science.

Suggested Groupings of Courses
The following groupings of courses for different focuses are suggested.

Aquatic Biology Focus
BISC 312-3 Environmental Toxicology I
BISC 414-3 Limnology
CHEM 360-3 Chemical Kinetics and Thermodynamics
GEOG 315-4 Regional Ecosystems
GEOG 316-4 Ecosystem Biogeography
GEOG 415-4 Advanced Biogeography
REM 311-3 Applied Ecology and Sustainable Environments
REM 412-3 Environmental Modelling

Aquatic Chemistry Focus
BISC 414-3 Limnology
CHEM 316-4 Introductory Instrumental Analysis
CHEM 317-2 Analytical Environmental Geochemistry
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 371-3 Chemistry of the Aqueous Environment
EASC 416-3 Field Techniques in Hydrogeology
NUSC 341-3 Introduction to Radiochemistry
REM 412-3 Environmental Modelling
REM 445-3 Environmental Risk Assessment and Management of Hazardous Substances

Earth Properties Focus
EASC 303-3 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
GEOG 313-4 Geomorphology II
GEOG 317-4 Soil Science I
GEOG 354-4 Introduction to Geographic Information Systems
STAT 403-3 Intermediate Sampling and Experimental Design

Atmospheric Focus
BISC 312-3 Environmental Toxicology I
CHEM 360-3 Chemical Kinetics and Thermodynamics
CHEM 372-3 Chemistry of the Atmospheric Environment
GEOG 314-4 Climatology II
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 467-3 Dynamical Systems
MATH 482-3 Fluid Dynamics
MACM 316-3 Numerical Analysis I
REM 412-3 Environmental Modelling
STAT 403-3 Intermediate Sampling and Experimental Design

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

Forestry 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 471-3 Forest Ecosystem Management

Honors Program
This program requires 132 credit hours. At least 60 must be upper division and 12 must be outside the Faculty of Science. 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 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 credits 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 both of:
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 register 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. To fulfill the required 48 upper division credit hours in a specific subject area, students normally choose further courses listed in the major program as options in years three and four. 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 semesters on campus with study-related employment. The program includes pre-employment orientation and four full-time paid work semesters. A major and honors program leading to an environmental science BSc degree and co-op education are available to qualified students. To enrol, students should attend co-op information meetings held in the first two weeks of the semester prior to the semester in which they wish to work. Students should also seek advice from Faculty of Science Co-op Education as early as possible in their university career to facilitate optimal scheduling. For more information, contact the co-op co-ordinator, Science and Environment Co-op Program, Department of Geography, 7130 Robert C. Brown Hall, telephone 604.291.3115.

Qualifications for Registered Professional Biologist of BC
Registered professional biologist (RBPBio) 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

Understanding

General Science Program
Advisor
Ms. R. Hotell, Faculty Assistant
This degree program provides broad education in several fields with some 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 General Physics I
PHYS 102-3 General Physics II
PHYS 130-2 General Physics 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
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 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

Simon Fraser University 2006 - 2007 Calendar
• 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 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.

Management and Systems Science Program

K10545 Shrum Science Centre, 604.291.3803 Tel, 604.291.4368 Fax, www.stat.sfu.ca

For a list of faculty, see “Department of Mathematics” on page 215 and “Department of Statistics and Actuarial Science” on page 226.

Advisor
Dr. K.L. Weldon BSc, MSc (Tor), PhD (Stan), K10555 Shrum Science Centre, 604.291.3687

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) leading to a BSc. These highly structured programs provide a multidisciplinary approach to quantitative methods for business and industry in a rapidly changing technology environment.

The management and systems science program co-ordinator is selected from the associated faculty. The program is managed alternately by the two departments: in academic years 2004/2005 and 2005/2006 the Department of Mathematics hosts the program; in academic years 2006/2007 and 2007/2008 the Department of Statistics and Actuarial Science hosts the program.

Students formally apply to be admitted into the program. Program admission is decided on a competitive basis. Acceptance will be based on the GPA in lower division program-related courses at Simon Fraser University as well as overall academic performance as measured by the cumulative grade point average (CGPA). The CGPA is calculated based on all work completed at Simon Fraser University as described in the General Regulations section.

Transfer and second degree students who have credit for all lower division requirements may apply for special admission consideration based on transcripts from other post-secondary institutions. To remain in the program, students must maintain a 2.5 CGPA. It is strongly recommended that you contact the program advisor or co-ordinator early about admission and scheduling.

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.
• Six elective credit hours must be completed in courses taken from outside the Faculty of Business Administration, School of Computing Science, Departments of Economics, Mathematics, and the Department of Statistics and Actuarial Science.
• Completion of all lower and upper division courses shown below is required. However, students should be aware of the departmental requirements for entrance into their courses. Contact those departments for further information.

Lower Division Requirements

Business Administration
one of
BUS 207-3 Managerial Economics
ECON 301-5 Intermediate Microeconomic Theory
plus all of
BUS 251-3 Financial Accounting I Computing Science
BUS 272-3 Behavior in Organizations

Computing Science
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
plus all of
CMPT 212-3 Object-Oriented Applications Design in C++
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 and Statistics
MATH 152-3 Calculus II
MATH 232-3 Elementary 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

Upper Division Requirements

For a BSc in management and systems science, all of the upper division courses listed below are required. Students must take a minimum of 34 upper division credit hours, of which at least nine are from each of the groups under business administration (excluding ECON 301), computing science, and mathematics and statistics. Those credit hours taken beyond 34 can be applied to other major or minor programs. Only one of ECON 301 and BUS 207 is required for this major program.

Business Administration
BUS 343-3 Introduction to Marketing
BUS 360-3 Business Communication
BUS 364-3 Information Systems in Organization and Society
BUS 473-4 Operations Management

Computing Science
one of
BUS 440-4 Simulation in Management Decision Making
CMPT 300-3 Operating Systems I
CMPT 305-3 Computer Simulation and Modelling
CMPT 307-3 Data Structures and Algorithms
CMPT 354-3 Database Systems I
CMPT 370-3 Information System Design

Economics
one of
BUS 207-3 Managerial Economics
ECON 301-5 Intermediate Microeconomic Theory

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 and Statistics
MATH 308-3 Linear Optimization
MATH 343-3 Applied Discrete Mathematics
MATH 345-3 Introduction to Graph Theory
STAT 350-3 Linear Models in Applied Statistics

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.

Note: BUSC 232, BUIC 333 and ECON 331 will not be accepted towards the 120 or 132 hours required for the MSSC major or honors degree.

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 123 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 443-3 Combinatorial Theory
MATH 445-3 Graph Theory
MATH 447-3 Coding Theory
• Students must also complete at least three credit hours in business administration or in economics at the 400 division.

For major or honors, the following upper division courses are recommended.

BUS 312-4 Business Finance
BUS 488-3 Human Relations in Business
BUIC 396-3 The Structure of Industry
CMPT 405-3 Design and Analysis of Computing Algorithms
ECON 431-3 Intermediate Mathematical Economics
MACM 316-3 Numerical Analysis I
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 443-4 Combinatorial Theory
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

Note: Students who wish to combine the MSSC honors program with another major or minor should consult with the MSSC program co-ordinator.
Department of Mathematics

K10512 Shrum Science Centre, 604.291.3331/3332
Tel. 604.291.4947 Fax, www.math.sfu.ca

Chair
T. Archibald BMSc (Wat), MA (York), MA, PhD (Tor)

Professors Emente
B.R. Alsipsh BA (Wash), MA, PhD (Calif)
G. Bojadziev PhD (Sofia Mech Eng Inst)
T.C. Brown BA (Reed), AM, PhD (Wash, Mo)
A. Das BS, MSc (Calg), PhD (University Coll, Dublin), DSc (Calg)
R. Harrop BA, MA, PhD (Camb)
A.H. Lachlan BA, MA, PhD (Camb), FRSC
R.W. Lardner BA, PhD, ScD (Camb)
N.R. Reilly BSc, PhD (Glas)
C.Y. Shen BS, MS, PhD (Oregon State)
M. Singh AB, MA (Punjab, India), MSc, PhD (Brown)
S.K. Thomason BS (Oregon), PhD (Cornell)
B.S. Thomson BSc (Tor), MA, PhD (Wat)

Professors
T. Archibald BMSc (Wat), MA (York), MA, PhD (Tor)
J.L. Berggren BS, MS, PhD (Wash)
P.B. Borwein BSc (WOn), MSc, PhD (Br Col)
A.S. Lewis BA, MA, PhD (Camb)
M. Mohar BSc, MSc, PhD (Ljubljana)
A. Punnen BSc (Kerala), MSc (Kanpur), PhD (IIT Kanpur)
R.D. Russell BS, MA, PhD (New Mexico)

Associate Professors
R. Choksi BSc (Tor), MS, PhD (Brown)
L. Goddyn BSc (SF Fraser), MMath, PhD (Wat)
J. Jedwab BA (Camb), PhD (Lond)
M.C.A. Kropinski BSc (Qu), MMath (Wat), PhD (Rensselaer)
M.B. Monagan BSc (Massey), MMath, PhD (Wat)
D. Muraki BSc, MSc (Cal Tech), PhD (Northwestern)
J. Stockie BMSc (Wat), PhD (Br Col)
M.R. Trummer PhD (Zür)

Assistant Professors
J. Bell BSc (Wat), MSc (McG), PhD (Calif)
N. Bruin PhD (Leiden)
I. Chen BSc (Qu), DPhil (Oxf)
K-K.S. Choi BSc, MPhil (HK), PhD (Texas)
R. Fetecau BSc (Iasi), MSc (Bucharest), PhD (Cal Tech)
Y. Lee MSc, PhD (Brown)
P. Lisonok MSc (Palacky), PhD (J Kepler)
Z. Lu BSc (Anhui), MSc (Xian Jiaotong), MSc (Alabama), PhD (Georgia IT)
M. Mishna BMSc (Wat), MSc (SF Fraser), PhD (UOAM)
A.M. Oberman BSc (Tor), MSc, PhD (Chic)
S. Ruuth BMSc (Wat), MSc, PhD (Br Col)
L. Stacho MSc, PhD (Slovak Acad Sc)
T. Stephen BMSc, (Wat), PhD (Mich)
R. Wittenberg BSc (Natal), MSc (Cape Town), PhD (Prin)
J.F. Williams MSc (SF Fraser), PhD (Bath)

Adjunct Professors
A. Celler MSc, PhD (Warsaw)
E.W. Lee BSc (Tor), MSc, PhD (S Fraser)
E. Pechlaner PhD (Vienna)
A. Rutherford BSc (Qu), PhD (Br Col)
G. Sabin BMSc, MSc (S Fraser), PhD (Windsor)
N. Tariq BSc, MSc (Lond), PhD (New Br)
J. Verner, BSc, MSc (Qu), PhD (Edin)

Associated Faculty
P. Lijedahl, Education
R. Zazkis, Education

Senior Lecturers
M.M. Dubiel MA, PhD (Warsaw)
M. Kozunnak MSc, PhD (Acad Sc Ukrainie),
PhD (TU Vienna)
R. Pyke BSc (Vic, BC), MSc, PhD (Tor)
Lecturers
T. Gray BMSc, MSc (SF Fraser)
V. Jungic BSc (Sarajevo), MSc (Zagreb), PhD (SF Fraser)
P. Menz BMSc (Tor), MSc, BEd (Br Col)
J. Muollohlin BMSc (SF Fraser), MSc, PhD (Br Col)
R. Pike BMSc (Vic, BC), MSc, PhD (Tor)

Advisors
Ms. J. Fabricius, K10512 Shrum Science Centre, 604.291.3332 (for registration advice)
Mrs. M. Fankboner BA (Occidental), MSc (SF Fraser),
K10511 Shrum Science Centre, 604.291.4849 (for program advice)

Open Workshops
Some introductory and service courses are organized through the department’s open workshops. In addition to regularly scheduled lectures, students registered in

these courses are encouraged to come to the workshops for assistance any time 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.

Bureany campus

Algebra Workshop (AQ 4135) – Matrix 100, 190, 232, MACK 201
Calculus Workshop (AQ 4110) – Matrix 150, 151, 152, 261
Applied Calculus Workshop (K 9503) – Matrix 154, 155, 157, 158

Simon Fraser University Surrey
Math Open Lab – Matrix 100, 130, 150, 151, 152, 190, 232, 251, MACK 201

Beginning Level Requirements

Students who do not have the appropriate prerequisites as listed below must successfully complete the Quantitative Placement Test in order to register 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 Quantitative Placement 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

Students interested in applied mathematics should be aware of the opportunities provided by the available 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.

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.

Minimum Grade Requirements

Students wishing to register for Department of Mathematics courses must have obtained grades of C- or better, in university division prerequisite courses.

Students interested in a Bachelor of Arts degree in mathematics and computer science, and the mathematical physics honors program in mathematics and computer science 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.

Bureany campus

Algebra Workshop (AQ 4135) – Matrix 100, 190, 232, MACK 201
Calculus Workshop (AQ 4110) – Matrix 150, 151, 152, 261
Applied Calculus Workshop (K 9503) – Matrix 154, 155, 157, 158

Simon Fraser University Surrey
Math Open Lab – Matrix 100, 130, 150, 151, 152, 190, 232, 251, MACK 201

Beginning Level Requirements

Students who do not have the appropriate prerequisites as listed below must successfully complete the Quantitative Placement Test in order to register 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 Quantitative Placement 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 232-3 Elementary 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 318-3 Partial Differential Equations
plus at least one of
MATH 461-3 Continuous Mathematical Models (or MATH 361)
MATH 462-3 Fluid Dynamics
plus at least two of
MACM 401-3 Introduction to Computer Algebra
MACM 418-3 Numerical Analysis II (or MATH 416)
MATH 308-3 Linear Optimization
MATH 309-3 Continuous Optimization
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 438-3 Linear Algebra
MATH 462-3 Fluid Dynamics
MATH 467-3 Dynamical Systems
MATH 461-3 Continuous Mathematical Models (or MATH 361)
MATH 495-3 Topics in Applied Mathematics
PHYS 211-3 Intermediate Mechanics
STAT 270-3 Introduction to Probability and Statistics

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.

Applied Mathematics Honors Program
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 CMPT 225-3 Mechanics and Special Relativity
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
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
and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I

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.

Industrial Mathematics Major and Honors Program
Advisors
Dr. M. Monagan, K10501 Shrum Science Centre, 604-291-4279/4544, mmonagan@cecm.sfu.ca
Dr. A. Punnen, Room 94–250 Central City, Surrey, 604.288.7611, apunnen@sfu.ca
Dr. J.F. Williams, K10524 Shrum Science Centre, 604-291-4544, jfw@math.sfu.ca
This program prepares students for careers in industry. Students will 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 for a major or honors degree, as the case may be, must be satisfied.

Major Program
The program requirements are divided into three parts: a core requirement 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. 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
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 232-3 Elementary 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 MATH 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 take one of the options A, B or C.

Option A: Operations Research
(offerred 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
MACM 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
(offerred 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
MACM 409-3 Numerical Linear Algebra and Optimization
plus two of
MATH 408-3 Discrete Optimization
MATH 447-4 Coding Theory
MACM 411-1 Introduction to Computational Algebra
MACM 412-3 Cryptography
plus two additional courses from Table I below

Option C: Discrete Mathematics
(offerred at the main campus in Burnaby)
Students must complete all of
MACM 201-3 Discrete Mathematics II
MATH 332-3 Introduction to Applied Algebraic Systems
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 411-3 Introduction to Computational Algebra
MACM 412-3 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 411-3 Introduction to Computational Algebra
MACM 412-3 Numerical Analysis II
MACM 442-3 Cryptography
MACM 409-3 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 Variations
MATH 332-3 Introduction to Applied Algebraic Systems
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 462-3 Fluid Dynamics
MATH 467-3 Dynamical Systems
MATH 470-3 Variational Calculus
PHYS 353-3 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 203.
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 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 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 does not appear in Table I may be substituted.
Students must also fulfill the Faculty of Science general requirements for an honors degree as outlined on page 203. Note that the only requirement listed there which is not already met by the above requirements for the industrial mathematics honors program (including the minor requirement) is the minimum grade point average requirement.

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.
For further details, see “Co-op Education” on page 231.

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 Computer 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 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
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 155 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 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

BSc 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 list of statistics (STAT) and actuarial mathematics (ACMA) courses: ACMA 310, STAT 330, 350, 402, 430, 450 and 460.

Of the 30 credit hour minimum total requirement 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 at the 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, 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, or PHYS 413, or from the following list of approved STAT and ACMA courses listed under Undergraduate 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 which they are registered. Students normally are required by the Department of Mathematics to

i) obtain at least 12 mathematics credit hours (MATH 100, 190, 197 or 198 may not be included) or mathematics/computing science (MACM) courses numbered 101-299 inclusive. These courses normally will include MATH 150 or 151 (or 154 or 157), 152 (or 155 or 158), and 232.

ii) obtain at least 15 credit hours of upper division mathematics (MATH), or mathematics/computing science (MACM).

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 126-3 Introduction to Computer Science and Programming or both of CMPT 120-3 Introduction to Computing Science and Programming I and CMPT 125-3 Introduction to Computing Science and Programming II and at least one of CMPT 150-3 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 232-3 Elementary Linear Algebra MATH 242-3 Introduction to Analysis STAT 251-3 Calculus III

Additional course work is required to total 21 upper division MATH credit hours and 24 upper division CMPT credit hours including the core requirements. MACM courses are counted in an alternating fashion towards the MATH and CMPT credit requirements, starting with the first MACM course taken, counting toward either MATH or CMPT. Twelve credit hours must be taken at the 400 division or higher, including at least three credit hours each of CMPT and MATH.

Upper Division Requirements – MACM Honors

Students must complete the following 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 CMPT 333-3 Introduction to Applied Algebraic Systems 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 towards 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 CMPT and MATH credit.

General Requirements

The program is subject to Faculty of Science and University regulations. Course and prerequisite admission is subject to departmental requirements. MACM major graduation is contingent upon a cumulative grade point average (CGPA) and upper division grade point average (UDGPA) of 2.00 or better. Students must also achieve a 2.00 or better CGPA and UDGPA in each of the CMPT, MACM and MATH designations. Admission, continuation and graduation in the MACM honors is contingent upon 3.00 or better on all relevant GPAs. Faculty of Applied Sciences residency requirements apply to the computing science courses used toward the program.

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 225 for details.

Co-operative Education

This program integrates work experience with academic study. See "Co-operative Education" on page 231. Contact the mathematical sciences co-op co-ordinator at 604.291.4123, K10558, for admission requirements and information.
Department of Molecular Biology and Biochemistry
8166 South Science Building, 604.291.5630 Tel, 604.291.5583 Fax, www.sfu.ca/mbb
Chair
B.P. Brandhorst AB (Harv), PhD (Calif)
Professors Emeriti
R.J. Cushey BSc, MSc, PhD (Alta)
W.R. Richards AB, PhD (Calif)
M.J. Smith BSc (St Mary's, Calif), PhD (Br Col)
Professors
D.L. Bailie 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 (Oz)
B.M. Honda BSc (McM), PhD (Br Col)
J.K. Scott AB (Occidental, MD (St Louis), PhD (Missouri), Canada Research Chair**
D.J. Sen BA (C Camb), MPhil, PhD (Yale)
Associate Professors
N.J. Chen BSc (Fudan), MSS (Br Col), PhD (Chin Acad Sc)
N. Harden BSc (Br Col), PhD (Camb)
M.R. Leroux BSc (McG), PhD (Br Col)
L.M. Quarmby BSc, MSc (Br Col), PhD (Conn)
J.L. Thewalt BSc, PhD (Fraser)**
E.M. Verheyen BA (Cornell), MPhil, PhD (Yale)
Assistant Professors
C.T. Beh BSc, MSc (Calg), PhD (Prin)
F.S.L. Brinkman BSc (Wat), PhD (Ott)
L. Craig BSc (Br Col), MSc, PhD (S Fraser)
N.C. Hawkins BSc, MSc (Calg), PhD (Prin)
M.W. Paetzel BSc (Syr), BSc (Minn), PhD (Ohio State)
F.F. Pio BSc, MSc (C Ferrand), PhD (Lille)
M.J. Urquart BSc (McM), PhD (MIT)
E.C. Young BSc (Tor), PhD (Brandes)
Adjunct Professors
T.J. Borgford BSc, PhD (Manit)
S.M. Gorski BSc (S Fraser), MSc (Br Col), PhD (Wash, Mo)
S. Jones BSc (Brist), MSc (S Fraser), PhD (Sanger)
M. Marra BSc, PhD (S Fraser)
F. Ouellette BSc (McG), MSc (Calg)
E. Stringham BSc, MSc (Manit), PhD (Br Col)
Associated Faculty
A.T. Beckenbach, Biological Sciences
A.J. Bennett, 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. Tibbits, Kinesiology
D. Vocadlo, Chemistry
Lecturers
I.V. Kovalyova MA (Brown), PhD (Qu)
I.C. Northwood BA (Vermont), PhD (Mass)
D.A.R. Sinclair BSc, MSc (Manit), PhD (Br Col)
*joint appointment with chemistry
**joint appointment with physics
***joint appointment with health sciences
Advisor
Dr I.C. Northwood BA (Vermont), PhD (Mass), 8142 South Science Building, 604.291.3536, inorthwo@sfu.ca
Major, minor and honors in molecular biology and biochemistry (MBB) are offered by the Faculty of Science. Program entry requires the permission of the molecular biology and biochemistry advisor. Students are encouraged to seek advice from the MBB advisor and declare an intention to major in MBB at any time following their first semester.
Students who have declared majors or honors may follow the requirements in effect when they were accepted, or the requirements as set out below.
Cumulative Grade Point Average Requirement
Acceptance into and continuation in the major requires a minimum cumulative grade point average (CGPA) of 2.5 upon completion of the lower division core courses (not including the CMP7 courses). Secondary school students admitted to the MBB major program via direct entry are required to achieve a 2.5 CGPA in all lower division required courses. Students who do not meet this requirement must withdraw from the MBB major program. Simon Fraser University students declaring the MBB major program must have completed all required lower division courses with a CGPA of 2.5 in those courses.
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 9 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) and/or directed reading courses. These would include courses such as MBB 490, 491, 492, 493, 871, 872, 873 as well as corresponding courses offered by other departments (e.g. BISC 490, 491, 492, 493, 499, 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 credits required for a degree (120 for the major and 132 for an honors respectively).
In addition, an honors student may not take more than a total of 15 credit hours of research and/or reading courses in one semester.
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
BSC 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 286-2 Organic Chemistry Laboratory II
MBB 221-3 Cell Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry
and one of
CMP 102-3 Introduction to Scientific Computer Programming
CMP 110-3 Event-Driven Programming in Visual Basic
CMP 120-3 Introduction to Computing Science and Programming I
and one of
MATH 150-3 Calculus 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 153-3 Calculus II for the Biological Sciences
and one of
PHYS 101-3 General Physics I
PHYS 102-3 Modern Physics and Mechanics
and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism

Upper Division Core Requirements
(24 credit hours)
Students must complete all of
MBB 309-3 Molecular Biology and Biochemistry Laboratory I
MBB 309-4 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
MBB 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 of the courses indicated by # and a minimum of one of the courses indicated by *. There is no upper limit on the quantity of courses in the following list that a student can complete.
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 425-3 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 credits,
* 44 must be upper division

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• 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 203.

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, 286-2 and 215-4
CMPT 102-3 or 110-3
MMB 221-3 and 222-3

6 hours of electives

Total 28-29 credit hours

Levels 5 and 6
MMB 331-3
CHEM 360-3 or MBB 323-3
MATH 310-3 or STAT 201-3 or STAT 270-3
MMB 308-3, 309-3, 321-3 and 322-3
MBB 432-3

9 hours of electives

Total 33 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)

Program admission requires a minimum 3.0 CGPA, 3.0 upper division GPA, and permission of the department. In addition to the major program requirements, MBB honors complete one of the following individual study semester options.

- either MBB 493-15 Individual Study Semester (Option B)
- or both of MBB 491-5 Individual Study Semester (Option A)*

*This may be accomplished by breaking the individual study semester project into two consecutive semesters.

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 203.

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 281-4 Organic Chemistry I
CHEM 282-2 Organic Chemistry II
CHEM 286-2 Organic Chemistry Laboratory II
MMB 221-3 Cell Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry

and one of
MATH 150-3 Calculus 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

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 registration, 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 105-3 Principles of Microeconomics
ECON 106-3 Principles of Macroeconomics
HIST 106-3 Western Civilization from the Reformation Era to the 20th Century
HIST 106-4 European History Since 1914

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
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.

MMB 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 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

Students are encouraged to enrol in the co-operative education program.
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 II
CHEM 126-2 General Chemistry Laboratory II
CHM 281-4 Organic Chemistry I
CHM 282-2 Organic Chemistry II
MBB 221-3 Cellular Biology and Biochemistry
MBB 222-3 Molecular Biology and Biochemistry
and one of
MATH 150-3 Calculus 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 102-3 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 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 three-credit ENGL or 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
MBB 309-4 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 343-3 Introduction to Marketing
BUS 360-3 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 an honors program, and must seek MBB department permission. In addition to the major program requirements, MBB/Business joint honors will complete both of six credit hours of 400 division BUS or BUEC courses beyond those required for the major program, 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, continuance 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 semesters during the normal academic program. See “Co-operative Education” on page 231.

Physical Geography Program

7123 Robert C. Brown Hall, 604.291.3321 Tel, 604.291.5841 Fax, www.sfu.ca/geography
Advisor
Ms. R. Multani, 7126 Robert C. Brown Hall, 604.291.4529

See “Department of Geography” on page 218 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 18 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

(52-53 credit hours)

Required Geography Courses
GEOG 100-3 Human Geography
GEOG 111-3 Physical Geography

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

and 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
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 150-3 Calculus 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 102-3 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*

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 428 for possible Physics course substitutions.

Upper Division Requirements

(45 credit hours)

Required Geography Courses — 300 division

and one 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

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GEOG 253-3 Aerial Photographic Interpretation
GEOG 253-3 Geographical Information Science I

one of
GEOG 322-4 World Resources
GEOG 323-4 Industrial Location
GEOG 324-4 Geography of Transportation
GEOG 325-4 Geography of Service Activities
GEOG 327-4 Geography of Tourism and Outdoor Recreation
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 389-4 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 Cartography

Required Geography Courses — 400 division

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 416-4 Pleistocene Geography
GEOG 417-4 Soil Science II

plus eight additional hours of upper division courses from any 300 or 400 division courses in geography

20 credit hours

Faculty of Science Courses

Students must complete a minimum of nine semester hours from 300-400 division BISC, CHEM, EASC, MASC, MATH, MBB, NUSC, PHYS and 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 203.

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 37 and “Requirements for Honors and Honors First Class” on page 203. 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 253-3 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 Biogeochmistry
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 416-4 Pleistocene Geography
GEOG 417-4 Soil Science II

Co-operative Education

Co-operative education augments academic studies with relevant work experience. The program includes four full-time paid work semesters which alternate with academic semesters. Work semester arrangements are made through co-op education. Physical geography BSc major and honors students apply for admission through the environmental co-operative education office. Students should seek advice from a co-op education co-ordinator as early as possible in their university careers. Apply for co-op education admission by the end of the third week of the preceding semester. Science students should obtain a minimum cumulative GPA of 2.5 to enrol and to continue in the program. Honors students are required to achieve higher averages. For information, contact the environmental co-op education co-ordinator. Telephone 604.291.3115.

Students in the geography major, BA program, should seek academic advice from a co-op education co-ordinator as early as possible in their university careers.

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 (APEBC). 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, 604.291.4465 Tel, 604.291.3592 Fax, www.sfu.ca/physics

Chair
B.J. Friskin BSc (Qu), MSc (Northwestern), PhD (Br Col)

Professors Emeriti
A.S. Arrott BS (Carnegie Tech), MS (Penn), PhD (Camb) (S Fraser)
J.F. Cochran BASc, MAsc (Br Col), PhD (Ill)
K. Colbert BSc, MSc (McM), PhD (Br Col)
E.D. Crozier BSc (Tor), PhD (Qu)
A.E. Curzon BSc (Lond), MSc (Leeds), PhD (Lond), ARCS, DIC
L.E. Pogosian BSc (Yerevan), MSc (WVirgina), PhD (Case W Reserve)

Assistant Professors
B. Davids BSc (Chic), PhD (Mich State)
B.K. Jennings BSc (MAli), MSc, PhD (McM)
M.R. Scheinin BS (MIT), PhD (McM)
M. Woolfshn BASc (Ma), PhD (NY State)
D. Zuckermann BA, DPhil (Oxf)

Associate Members
M. Eikerling, Chemistry
D. E. Nelson, Archaeology

Senior Lecturers
N. Alberding BSc (WOnt), PhD (Ill)
S. Johnson BS (S Cali), MA, PhD (CUNY)
A. DeBenedicts BSc (Br Col), MSc (Windsor), PhD (S Fraser)
S. Johnson BS (S Cali), MA, PhD (Roche)

Advisor
Dr. A. DeBenedicts BSc (Br Col), MSc (Windsor), PhD (S Fraser), P9444 Shrum Science Centre, 604.291.4369

*joint appointment with biochemistry
**joint appointment with engineering science

Minimum Grade Requirement

Students wishing to register for physics courses must obtain a C- grade or better in prerequisite courses.

Writing, Quantitative, and Breadth Requirements

Students completing degree programs must fulfil writing, quantitative and breadth requirements as part of their program. See “Writing, Quantitative and Breadth Requirements” on page 7 for information.
First Year Physics
The Department of Physics offers four streams of introductory physics. Students should choose a stream that is based on its interests and abilities, and on what is required for their intended program.

Advanced: PHYS 125/126
Recommended for students intending to major in physics or applied mathematics as well as for most engineering students. Prerequisite: a grade of ‘A’ in both Physics 12 and Principles of Mathematics 12, or equivalent. MATH 151/152 are corequisites.

Standard: PHYS 120/121
General, introductory physics for non-life science students. MATH 151/152 are corequisites.

Life Sciences: PHYS 101/102
Recommended for students who wish to specialize in biochemistry, kinesiology or other life sciences. MATH 154/155 are corequisites.

Studio Physics: PHYS 140/141
Currently offered only at Simon Fraser University Surrey, this course covers the same material as PHYS 120/121 plus PHYS 131 but in a more interactive, combined lecture-lab environment. MATH 151/152 are corequisites.

The content of all four streams is similar, though the different streams demand different levels of mathematical sophistication and problem-solving ability. The program's lab component is incorporated into PHYS 140/141 but it is taken as a separate course for the other streams. The courses count as duplicates and students may switch from one stream to another between semesters. It is possible to switch between streams during the first three weeks of the semester if the chosen stream is found to be inappropriate.

Students interested in pursuing a physics undergraduate degree should take PHYS 125/126 because this stream offers the best preparation. However, preparation obtained in PHYS 120/121 or PHYS 140/141 should be adequate. Students who achieve grades of B or better in PHYS 101/102 should be able to continue in physics. All potential physics students should consult a physics advisor as early as possible to discuss their program.

Open Workshops
PHYS 100, 101 and 102 have tutorials that are held in an open workshop format with unstructured periods. Each week teaching assistants are available to answer questions and help with problem assignments.

Computer Skills
The department recognizes that some students become proficient in a high-level programming language such as those taught in CMPT 102 through self-study. Such individuals should consult the physics advisor.

Recommended Programs
The recommended schedules for all physics programs can be found on the web at www.sfu.ca/physics/undergraduate/physPrgrams.html.

Applied Physics Major Program
This program, leading to a BSc, offers a solid background in physics combined with the applied aspect necessary for careers in high technology industries. Students should enrol in the co-op program to acquire valuable industrial experience.

Lower Division Requirements
(57 credit hours)
Students must complete all of the following.

CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-4 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CMPT 102-3 Introduction to Scientific Computer Programming
CMPT 150-3 Introduction to Computer Design
CMPT 250-3 Introduction to Computer Architecture
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
PHYS 131-2 Physics Laboratory I
PHYS 211-3 Intermediate Mechanics
PHYS 221-3 Intermediate Electricity and Magnetism
PHYS 231-3 Physics Laboratory I
PHYS 232-2 Vector Calculus Laboratory
PHYS 253-3 Vibrations and Waves
PHYS 285-3 Introduction to Relativity and Quantum Mechanics

and one of
MATH 150-4 Calculus I with Review
MATH 151-3 Calculus I

and one of
PHYS 120-3 Mechanics and Modern Physics
PHYS 125-3 Mechanics and Special Relativity
PHYS 140-4 Studio Physics – Mechanics and Modern Physics

and one of
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 126-3 Electricity, Magnetism and Light
PHYS 141-4 Studio Physics – Optics, Electricity and Magnetism

*students with credit for PHYS 140 and 141 are not required to take PHYS 131

Upper Division Requirements
(36 credit hours)
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 324-3 Electromagnetics
PHYS 352-4 Electronics and Instrumentation
PHYS 353-3 Optics Laboratory
PHYS 384-3 Thermal Physics
PHYS 385-3 Optics
PHYS 395-3 Quantum Mechanics I

and 14 credit hours selected from the following
MACM 316-3 Numerical Analysis I (or PHYS 395)
NUSC 341-3 Introduction to Radiochemistry
NUSC 346-2 Radiochemistry Laboratory
PHYS 365-3 Semiconductor Device Physics
PHYS 430-4 Digital Electronics and Interfacing
PHYS 431-4 Advanced Physics Laboratory I
PHYS 455-3 Applied Optics
PHYS 465-3 Solid State Physics

Other Requirements
Please see “Requirements for Major” on page 203.

Biological Physics Major Program
This program is for those who are interested in using physical approaches to tackle biological problems. Students should speak with an advisor as soon as possible to schedule their programs.

Lower Division Requirements
(67-68 credit hours)
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 and Laboratory I
CHEM 282-2 Organic Chemistry II

MATH 151-3 Calculus I
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
MATH 281-3 Vector Calculus
MATH 282-2 Vector Calculus

and one of
PHYS 101-3 General Physics I
PHYS 120-3 Mechanics and Modern Physics
PHYS 125-3 Mechanics and Special Relativity
PHYS 140-4 Studio Physics – Mechanics and Modern Physics*

and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 126-3 Electricity, Magnetism and Light
PHYS 141-4 Studio Physics - Optics, Electricity and Magnetism*

and one of
PHYS 130-2 General Physics Laboratory
PHYS 131-2 Physics Laboratory I

and one of
CHEM 260-4 Atoms, Molecules, Spectroscopy
PHYS 285-3 Introduction to Relativity and Quantum Mechanics

*students with credit for PHYS 140 and 141 are not required to take PHYS 131

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
(50-62 credit hours)

Students must complete all of:

- CHEM 121-4 General Chemistry and Laboratory I
- CHEM 122-2 General Chemistry II
- CHEM 126-2 General Chemistry Laboratory II
- CMPT 102-3 Introduction to Scientific Computer Programming
- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- PHYS 121-3 Optics, Electricity and Magnetism
- PHYS 125-3 Vibrations and Waves
- PHYS 126-3 Electricity, Magnetism and Light

and one of:

- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 125-3 Mechanics and Special Relativity
- PHYS 140-4 Studio Physics – Mechanics and Modern Physics*

and one of:

- CHEM 260-4 Atoms, Molecules, Spectroscopy
- PHYS 285-3 Introduction to Relativity and Quantum Mechanics

*students with credit for PHYS 140 and 141 are not required to take PHYS 131

Upper Division Requirements
(39-40 credit hours)

- 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 324-3 Electromagnetics
- PHYS 326-4 Electronics and Instrumentation
- PHYS 332-3 Optics Laboratory
- PHYS 336-3 Thermodynamics and Chemical Kinetics
- PHYS 344-3 Thermal Physics
- PHYS 445-3 Statistical Physics
- PHYS 485-3 Quantum Mechanics I

plus 13 upper division chemistry, nuclear science or physics credit hours chosen to maintain a minimum of 15 upper division credit hours in both chemistry and physics

*the requirement of PHYS 233 as a prerequisite for PHYS 332 is waived for students in the chemical physics major and honors programs

Other Requirements

Please see "Requirements for Major" on page 203.

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
(49 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 152-3 Calculus II
- MATH 232-3 Elementary Linear Algebra
- MATH 251-3 Calculus III
- PHYS 231-3 Physics Laboratory II
- PHYS 255-3 Vibrations and Waves
- PHYS 232-3 Physics Laboratory III
- PHYS 285-3 Introduction to Relativity and Quantum Mechanics

and one of:

- MATH 150-4 Calculus I with Review
- MATH 151-3 Calculus I
- PHYS 120-3 Mechanics and Modern Physics
- PHYS 125-3 Mechanics and Special Relativity
- PHYS 140-4 Studio Physics – Mechanics and Modern Physics*

and one of:

- CHEM 260-4 Atoms, Molecules, Spectroscopy
- PHYS 285-3 Introduction to Relativity and Quantum Mechanics

*students with credit for PHYS 140 and 141 are not required to take PHYS 131

Upper Division Requirements
(31 credit hours)

- CMPT 102-3 Introduction to Ordinary Differential Equations
- PHYS 332-3 Optics Laboratory
- PHYS 334-3 Thermal Physics
- PHYS 355-3 Optics
- PHYS 385-3 Quantum Mechanics I

In addition, a minimum of 12 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 203.

Biological Physics Honors Program

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 223) 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
- PHYS 425-3 Electromagnetic Theory
- 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 do undergraduate 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 384-3 Methods of Theoretical Physics I
PHYS 415-3 Quantum Mechanics II
and one of
PHYS 324-3 Electromagnetics
PHYS 425-3 Electromagnetic Theory
and one of
PHYS 326-4 Electronics and Instrumentation
PHYS 332-3 Optics Laboratory
and one of
CHEM 360-3 Thermodynamics and Chemical Kinetics
PHYS 344-3 Thermal Physics
and one of
CHEM 460-3 Advanced Physical Chemistry
PHYS 445-3 Statistical Physics
and one of
CHEM 464-3 Quantum Chemistry
PHYS 385-3 Quantum Mechanics I
and one of
CHEM 440-3 Chemistry of Materials
PHYS 465-3 Solid State Physics
and one of
CHEM 481-5 Undergraduate Research
PHYS 432-5 Undergraduate Honors Thesis
plus upper division chemistry, nuclear science or physics credit hours chosen to bring the total upper division credit hours to 51, and maintain a minimum of 21 upper division credit hours in both chemistry and physics.

*the requirement that PHYS 233 as a prerequisite for PHYS 332 is waived for students in the chemical physics major and honors programs*

### Upper Division Requirements

(54-56 credit hours)

Students must complete all of
MACM 316-3 Numerical Analysis I
MATH 310-3 Introduction to Ordinary Differential Equations
MATH 320-3 Introduction to Analysis II
MATH 322-3 Complex Variables
MATH 418-3 Partial Differential Equations
and one of
MATH 419-3 Linear Analysis
MATH 424-3 Applications of Complex Analysis
MATH 425-3 Real Analysis
and one of
MATH 461-3 Continuous Mathematical Models
MATH 462-3 Fluid Dynamics
MATH 495-3 Selected Topics in Applied Mathematics
and one of
MACM 401-3 Introduction to Computer Algebra
MACM 416-3 Numerical Analysis II
MATH 467-3 Dynamical Systems
and all of
PHYS 332-3 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
PHYS 425-3 Electromagnetic Theory
and two of
PHYS 390-3 Introduction to Astrophysics
PHYS 432-5 Undergraduate Honors Thesis
PHYS 465-3 Solid State Physics
PHYS 484-3 Nonlinear Physics
PHYS 485-3 Particle Physics
PHYS 490-3 General Relativity and Gravitation

### Other Requirements

Please see “Requirements for Honors and Honors First Class” on page 203.

### Mathematical Physics Honors Program

This program is offered jointly by the Departments of Mathematics, and Physics. Entry requires permission of both departments and permission to do 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 program.

### Lower Division Requirements

(49-50 credit hours)

Students must complete one of
CMPT 102-3 Introduction to Scientific Computer Programming
CMPT 126-3 Introduction to Computer Programming (or CMPT 120 and 125)
and all of
MATH 152-3 Calculus II
MATH 232-3 Elementary Linear Algebra
MATH 242-3 Introduction to Analysis I
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
PHYS 131-2 Physics Laboratory I*
PHYS 211-3 Intermediate Mechanics
PHYS 221-3 Intermediate Electricity and Magnetism
PHYS 231-3 Physics Laboratory II

### 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

(51 credit hours)

MATH 310-3 Introduction to Ordinary Differential Equations.
PHYS 332-3 Optics Laboratory
PHYS 344-3 Thermal Physics
PHYS 355-3 Optics
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 425-3 Electromagnetic Theory
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 Applied Optics
PHYS 469-3 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 395-3 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 203.

### Physics and Physiology Honors Program

This challenging program is offered jointly by the Department of Physics and the School of Kinesiology. It provides a strong physics background with enough physiology and biomechanics emphasis for biotechnology industry work to pursue physiology, kinesiology, or biophysics graduate studies, or to attend professional programs such as medicine. Students pursuing physics graduate work must take fourth year PHYS courses beyond those specified. Medical school applicants should check entrance requirements for the school to which they apply. Participants in the program may participate in the co-operative education program.

### Lower Division Requirements

(56 credit hours)

BISC 101-4 General Biology
CHEM 121-4 General Chemistry and Laboratory I
CHEM 122-2 General Chemistry II
CHEM 126-2 General Chemistry Laboratory II
CMPT 102-3 Introduction to Scientific Computer Programming
KIN 205-3 Introduction to Human Physiology
MATH 232-3 Elementary Linear Algebra
MATH 251-3 Calculus III
MATH 252-3 Vector Calculus
MBS 221-3 Cellular Biology and Biochemistry
PHYS 211-3 Intermediate Mechanics
PHYS 213-3 Intermediate Electricity and Magnetism
PHYS 231-3 Physics Laboratory I
PHYS 283-3 Introduction to Relativity and Quantum Mechanics
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 155-3 Calculus II for the Biological Sciences
and one of
PHYS 101-3 General Physics I
Co-operative Education Program

Dr. K. Kavanagh, Physics co-op co-ordinator, P4443 Shrum Science Centre, 604.291.4244, kavanagh@sfu.ca
Ms. S. Stanley, Faculty of Science co-op co-ordinator, C9033 Shrum Science Centre, 604.291.4694, sstanley@sfu.ca

Co-op combines work experience with academic studies. The student spends alternate semesters on campus and in study related jobs. Please see “Co-operative Education” on page 231.

Department of Statistics and Actuarial Science

K10545 Shrum Science Centre, 604.291.3803 Tel, 604.291.4368 Fax, www.stat.sfu.ca

Chair
R.D. Routledge BSc (Qu), MSc (Alta), PhD (Dal)

Professor Emeritus
M.A. Stephens BSc (Bris), AM (Harv), PhD (Tor)
Shrum Chair
S. Thompson AB (Calf), MS, PhD (Oregon State)

Professors
C.B. Dean BSc (Sask), MMath, PhD (Wat)
R.A. Lockhart BSc (Br Col), MA, PhD (Calif)
R.D. Routledge BSc (Qu), MSc (Alta), PhD (Dal)
C.J. Schwarz BSc, MMath (Wat), MSc, PhD (Manit)
R.R. Sitter BSc, MSc (Br Col), PhD (Wat)
T.B. Swartz BMath (Wat), MSc, PhD (Tor)

Associate Professors
J. Graham BSc, MSc (Br Col), MSc, PhD (Wash)
J. Hu BS, MS (Peking), PhD (Wat)
W.B. McIneney BSc, MSc (Br Col), MSc, PhD (Calif)
G. Parker BSc, MSc (Laval), PhD (H-W)
B. Tang BS, MS (Peking), PhD (Wat)
K.L. Weldon BSc, MSc (Tor), PhD (Stn)

Assistant Professors
R. Altmann BA (Wat), MS (Cornell), PhD (Br Col)
D. Bingham BSc (C’dia), MSc (Car), PhD (S Fraser), Canada Research Chair
Y. Lu BSc (Fudan Shanghai), MSc, PhD (C’dia)
C. Tsai BS (Ntli Taiwan), MS (Ntn Chiao-Tung Taiwan), MS (Wisc), PhD (Wat)

Adjunct Professors
R.F. Balshaw BSc, MSc (Manit), PhD (S Fraser)
S.G. Banneheka MSc (Lond), MSc, PhD (Dal)
P. Gill BSc, MSc (Punag), PhD (IIT Kanpur)
F. He BSc, MSc (Nanjing Forest), MSc (Chin Acad Sc), MSc, PhD (Montr)
N.W. Hengartner BSc (Laval), MMath (Wat), PhD (Calif)
J.J. Spinelli BSc, MSc, PhD (S Fraser)

Associate Member
N. Reilly, Mathematics

Senior Lecturer
R. Insley BSc, MSc (Br Col)

Statistical Consulting Service
I. Ber covitz BSc (Br Col), MSc (Car)

The department maintains a committee of advisors each year. Their office hours are available through the general office. Major students should seek advice early in their academic careers about program planning from these advisors.

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, see page 183. The department also offers a statistics minor and a certificate in Actuarial Mathematics.

The following programs in statistics train 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 fully appreciate their application, it is important that students also gain advanced training in an area of potential application. To this end, major or honors students in statistics complete a minor in a field other than statistics. In keeping with the almost universal applicability of statistical methodology, there are no other restrictions on the selection of a minor. Students should discuss this selection with an advisor early in their program.

Students interested in statistics or in actuarial science may consider the following related programs: mathematics and computing science, management and systems science.

Undergraduate

PHYS 120-3 Mechanics and Modern Physics
PHYS 125-3 Mechanics and Special Relativity and one of
PHYS 102-3 General Physics II
PHYS 121-3 Optics, Electricity and Magnetism
PHYS 128-3 Electricity, Magnetism and Light and one of
PHYS 130-2 General Physics Laboratory
PHYS 131-2 Physics Laboratory I

Upper Division Requirements

(53-58 credit hours)

CHEM 360-3 Chemical Kinetics and Thermodynamics
KIN 301-3 Biomechanics Laboratory
KIN 305-3 Human Physiology I
KIN 306-3 Human Physiology II
KIN 407-3 Human Physiology Laboratory
MATH 310-3 Introduction to Ordinary Differential Equations
PHYS 324-3 Electromagnetics
PHYS 326-3 Electronics and Instrumentation
PHYS 331-3 Electronics Laboratory
PHYS 384-3 Methods of Theoretical Physics I
PHYS 432-5 Undergraduate Honors Thesis

and three of
KIN 326-3 Functional Anatomy
KIN 412-3 Molecular and Cellular Cardiology
KIN 415-3 Neural Control of Movement
KIN 415-3 Control of Limb Mechanics
KIN 416-3 Electrophysiological Techniques Laboratory
KIN 426-3 Neuroumuscular Anatomy
KIN 442-3 Biomedical Systems
KIN 485-4 Human Factors in the Underwater Environment

and three of
NUSC 341-3 Introduction to Radiochemistry
PHYS 332-3 Optics Laboratory
PHYS 355-3 Optics
PHYS 395-3 Computational Physics
PHYS 413-3 Advanced Mechanics
PHYS 415-3 Quantum Mechanics II
PHYS 425-3 Electromagnetic Theory
PHYS 430-3 Digital Electronics and Interfacing
PHYS 431-4 Advanced Physics Laboratory I
PHYS 445-3 Statistical Physics
PHYS 455-3 Applied Optics
PHYS 484-3 Nonlinear Physics

Students may choose to graduate in either the Faculty of Science or the Faculty of Applied Sciences and should choose their electives accordingly.

Notes:
(1) The prerequisite of KIN 201 may be waived by the School of Kinesiology provided that PHYS 211 has already been taken.
(2) The prerequisite of CHEM 281 may be waived by the School of Kinesiology.
(3) Supervised jointly by the Department of Physics and the School of Kinesiology.

Nuclear Science Minor Program

This minor program is offered jointly with the Department of Chemistry. See page 208 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.
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.

Open Workshops
Some introductory and service courses are organized through the department's open workshops. In addition to regularly scheduled lectures, students registered in STAT 101, 201, 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 registering in a statistics course who do not have BC high school mathematics 11 (or equivalent) must see the basic math workshop co-ordinator (as described under Mathematics in the Course Catalogue section). 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 for 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 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

In addition the following two courses may be taken but students may not subsequently obtain credit for STAT 100.

Upon taking any service or mainstream course, credit

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
STAT 450-3 Statistical Theory

List 2
plus four of the following list 2 courses (at least one must be ACMA 465, 470 or 475)
ACMA 395-3 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 301-5 Intermediate Microeconomic Theory
ECON 305-5 Intermediate Macroeconomic Theory
MACM 316-3 Numerical Analysis I
MATH 308-3 Linear Programming
MATH 310-3 Introduction to Ordinary Differential Equations
STAT 350-3 Linear Models in Applied Statistics
STAT 380-3 Introduction to Stochastic Processes

Certain elective courses are pre-approved courses for Valuation by Educational Experience (VEE) credits from the Society of Actuaries. Information is available at www.soa.org.

To satisfy Faculty of Science requirements, students must complete the following upper division courses be either selected from ACMA 390, 465, 470, 475, 490 or MACT 316. Note that for honors students these four courses may not overlap with those used to satisfy requirements d) and e) 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.

Actuarial Science Honors Program
See the University and Faculty of Science regulations for required total credits 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 227)
- the upper division requirements in list 1 for the Actuarial Science major program (see “List 1” on page 227)
- seven list 2 courses in the upper division requirements for the Actuarial Science major program (see “List 2” on page 227). At least two of these seven courses must be from ACMA 465, 470, 475 or 490.

Statistics Major Program

a) Lower Division Requirements
Mathematics
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 153-3 Calculus II for the Biological Sciences
MATH 158-3 Calculus for the Social Sciences II

plus both of
MATH 292-3 Elementary Linear Algebra
MATH 251-3 Calculus III

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
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

b) Upper Division Requirements
Students must complete all of
STAT 330-3 Introduction to Mathematical Statistics
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 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 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.

Statistics Honors Program
A bachelor of science with honors in statistics requires 132 credit hours. Please see “Requirements for Major” on page 203 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 400-3 Decision Analysis and Bayesian Inference

Statistics Minor Program

Statistics minor candidates are subject to the general regulations of the faculty in which they are registered. 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 Special Topics in Actuarial Science
- STAT 330-3 Introduction to Mathematical Statistics*
- STAT 350-3 Linear Models in Applied Statistics*
- STAT 380-3 Introduction to Stochastic Processes
- STAT 400-3 Data Analysis
- 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
- STAT 460-3 Decision Analysis and Bayesian Inference
- STAT 480-3 Special Topics in Probability and Statistics
- STAT 495-3 Directed Studies in Probability and Statistics

*these core courses are recommended

**Certificate in Actuarial Mathematics**

This program provides the mathematical and statistical background for the Society of Actuaries early examinations. 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
- MATH 238-3 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 at least four of

- ACMA 320-5 Actuarial Mathematics I
- ACMA 335-3 Risk Theory
- ACMA 385-3 Special Topics in Actuarial Science
- ACMA 425-3 Actuarial Mathematics II
- ACMA 445-3 Survival Models
- ACMA 490-3 Special Topics in Actuarial Science
- ACMA 495-3 Directed Studies in Actuarial Science

Degree holders may receive waivers and/or transfer credits. In all cases, a minimum of nine courses is required while in the certificate program. At least six courses must be taken at Simon Fraser University, of which a minimum of four must be ACMA courses. The GPA in the graduation requirement will be calculated based only on courses taken at Simon Fraser University.

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.

**Management and Systems Science Program**

Please see page 214 for information.

**Co-operative Education**

This program integrates work experience with academic study. See "Co-operative Education" on page 231 and consult early with the co-op co-ordinator, Mr. E. Simons, at esimons@sfu.ca.
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 registration procedures as full time students. Relevant sections of this Calendar should be consulted concerning policies and procedures for admission, registration, 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 who wish to study in the evenings 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 with the certificate or diploma program advisor regarding the availability of courses in upcoming semesters. Proposed course scheduling is available for many programs on request.

For information regarding upcoming courses at Simon Fraser University Vancouver, please call 604.291.5134.

Integrated Studies

The Integrated Studies (IS) program is an interdisciplinary degree completion program leading 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. The application deadline for the May intake is March 1st. Further information may be obtained at www.sfu.ca/Integratedstudies or by calling 604.291.5128/5144.

Special Audit Student

The category of special audit student enables members of the community to access University credit courses as auditors. People interested in taking regular courses but who do not meet the general admission requirements or do not desire admission to the University may apply as special audit students. Such students attend courses but do not write final examinations or receive degree credit, record 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, 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 and who are Canadian citizens or have permanent resident status in Canada are exempt from this fee. Special audit students may not change registration status after the semester has commenced.

Seniors Program

This program is an integral part of Simon Fraser 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 31st year, the Seniors Program offers a series of 17 intellectually challenging non-credit courses each week at both the Vancouver and Surrey campuses, 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 have a duration of eight 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 admission to the University to take 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 semester, or at the Burnaby or Surrey campuses. A Senior Citizens Certificate is available for those who complete 30 credit hours or more of courses. 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 web page at www.sfu.ca/seniors, or call 604.291.5212.
Language Program

German
The Goethe Zentrum offers progressively structured non-credit German language courses at the elementary, intermediate and advanced levels following the standardized Goethe-Institute curriculum. Special Topic courses such as conversation, refresher, and examination preparatory courses for advanced learners are offered as demand warrants. A co-operative agreement between Simon Fraser University and the Goethe-Institute in Germany enables the Goethe Zentrum to offer various levels of internationally recognized proficiency exams for work or study in a German speaking country.

Self Instructional Language Program
The less commonly taught languages Punjabi, Filipino and Ukrainian are offered at two levels as non-credit Self Instructional Language Programs (SILP) at Simon Fraser University Vancouver and at Simon Fraser University Surrey. SILP courses are a combination of distance education and face-to-face instruction. The students study at home and attend one-hour tutorials twice a week to practice oral language skills and to learn how to read and write the Punjabi and Ukrainian scripts.

French
In partnership with Language Training Canada (LTC), the Public Service Commission’s language institute, Simon Fraser University offers non-credit French classes for civil service employees and the general public in Vancouver, Victoria and other locations throughout the province. The courses are aimed primarily at helping public sector employees perform job-related and personal tasks in French.

Research and Evaluation Unit
Non-credit courses in organizational research and evaluation techniques are being developed. The unit has provided research and evaluation services for several years to clients within and outside the university. For more information, please visit our website at www.sfu.ca/cstudies/eval.htm or contact us at 604.291.5186/5071.

Centre for Online and Distance Education
The centre, working in partnership with the academic units, offers courses leading to majors, minors, 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 the following areas: 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 that are offered through the Centre for Online and Distance Education are governed by the same regulations and follow the same admission and registration procedures as students taking other university credit courses. Simon Fraser University students can register in day, evening or distance/online courses, or a combination thereof.

For more information regarding programs and course availability visit www.sfu.ca/cde, e-mail cde@sfu.ca or telephone 604.291.3524; 1.800.663.1411 (toll free in Canada).

Certificates, Diplomas and Non-credit Courses
In addition to the degree credit study opportunities it offers, Continuing Studies develops and offers certificates, diplomas and non-credit courses in a broad variety of disciplines. Developed in association with university faculty members and professional organizations and adding to the richness of Continuing Studies’ wide range of individual courses, workshops and seminars, these programs extend university expertise to the community and bring community knowledge and priorities into the university.

Certificate Programs

Basic Interpreter Program
This program provides students with the fundamental skills of interpreting through hands-on practice, and focuses on language enhancement for both English and the student’s native languages.

Business Writing, Public Relations and Marketing Communication
Designed with the business writer in mind, this program equips participants with the skills on which they will draw to prepare all manner of 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 teaches participants to communicate effectively by building reading, writing, listening and speaking skills while gaining a working knowledge of the Canadian cultural context.

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 in this program 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 that are used to train and support users of software and hardware products. Also essential in other business sectors and government, technical communicators produce training materials, policy and procedure manuals, and a variety of other organizational documents.

Urban Design
This interdisciplinary program features two- and three-day intensive courses taught by leading urban design practitioners who emphasize the economic, social and environmental aspects of urban design. The program includes both theory and practice through lectures, site visits, case studies, group projects, and assignments which are designed to enhance mid-career urban design skills and create a synergy between the classroom and the workplace. 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 participants with opportunities to develop and finish a significant portion of a manuscript. This program also includes working on the editorial, design, and production of Emerge, an anthology of student work.

Diploma Programs

Advanced Interpreter Program
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.

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.

Non-credit Courses
Continuing Studies offers a broad variety of unique non-credit courses, and certificate and diploma programs frequently spawn new, complementary short courses, workshops and seminars.

All non-credit short courses, workshops, seminars, colloquia and conferences, round-tables and dialogues are developed with the approval of, and are sponsored by, an academic department or academic advisory committee. Most courses have external partners from the public and private sectors, all levels of government and community groups.

The following are the non-credit programming units in Continuing Studies:

Applied Sciences Programs
City Program
Community Education Programs
Conference Services
Dialogue Programs
English Language and Culture Program
Interdisciplinary Programs
Interpretation and Translation Program
Language Programs
Management and Professional Programs
Science Programs
Seniors Program
Writing and Publishing Program

Programs are also developed in partnership with the Chief Dan George Centre for Advanced Education.

For more details about Continuing Studies courses, public lectures, seminars and workshops, visit our website at www.sfu.ca/cstudies.
Co-operative Education

1150 Maggie Benston Student Services Centre, 604.291.3255 Fax, www.sfu.ca/coop
Director of Co-operative Education (acting)
M. Kiemets BBA (Regina), 604.291.3836
International Co-ordinators
Ms. T. Behrisch, 604.291.5649
Ms. C. Wakelin, 604.291.5649
Bridging Online Co-ordinator
Ms. A. Sator, 604.291.6745
Curriculum Development Co-ordinator
Ms. Q. Beck, 604.291.6743
Communications and Marketing Co-ordinator
Ms. B. Delves, 604.268.7374
Applied Sciences Programs
Mr. T Botelho, Program Manager 604.291.5954, 5138 Academic Quadrangle
Arts and Social Sciences Program
6046 Academic Quadrangle, 604.291.5839 Fax
Ms. P. Johnston, Program Manager, 604.291.3041
Ms. C. Wakelin, 604.291.5751
Ms. E. Lewis, 604.291.3776
Business Administration Program (including CA)
2310 Lohn Building, 604.291.3619 Fax,
Mr. J. Haieh, 604.291.3308
Ms. Y. Jin, 604.291.3270
Ms. M. Kiemetski, Program Manager, 604.291.4993
Ms. A. Lee, 604.291.5540
Ms. S. Mandley, (604) 268-6688
Ms. L. Zholobof, 604.291.5931
Communication Program
K9665, 604.291.4024 Fax,
Ms. M. Shimizu, 604.291.3862
Ms. E. Wah, 604.291.5542
Computing Science Program
9830-34 Applied Science Building,
604.291.4313 Fax,
Ms. H. Choicente, 604.291.3917
Ms. S. Tomaker, 604.291.3239
Mr. N. Chima, Simon Fraser University Surrey,
604.268.7430
Engineering Science Internship Program
9701 Applied Science Building, 604.291.5885 Fax,
Ms. P. Scott, 604.291.5806
Mr. A. Jenkins, 604.268-6703
Ms. G. Litchfield, 604.268.6931
Kinesiology Program
K9620 Shrum Science Centre, 604.291.3040 Fax,
Ms. D. Bernister, 604.291.4544
Science and Environment Program (including Mathematics, Statistics and Actuarial Science, Management and Systems Science)
604.291.4716 Fax
Mr. P. DeGrace, 604.291.3115, 7110 Robert C. Brown Hall
Ms. M. Fetterly, 604.291.4654, 8108A South Science Building
Ms. S. Stanley 604.291.4694, C9033 South Science Building
Mr. E. Simons, Program Manager, 604.291.4123,
K10558 Shrum Science Centre
Mr. S. Billings, 604.291.5934, 8108B South Science Building
Co-operative Education is an international model of enriched education which integrates academic studies with learning through related work experience. Co-operative education reflects the co-operationship between the educational institution, the employer and the student.

Admission Requirements
Co-op programs are open to Canadian citizens, permanent residents, and visa students. Visa students in co-op programs are eligible for work permits which are only valid for jobs arranged through the co-op program. Co-op is mandatory for the School of Engineering Science (see “School of Engineering Science” on page 116) and optional for all others.

Application Procedure
Co-operative education has an application process, which includes completing the Bridging Online (BOL) course (except for the School of Engineering Science). See www.sfu.ca/coop/bol for details. Science and environment students may exempt themselves from BOL I by indicating on the co-op application form their intent to complete the science and environment workshop. For details, see www.sfu.ca/coop for information. Students should attend program specific information meetings held the first and/or second week of classes, and should contact appropriate co-ordinators as early in their university career as possible, but no later than one semester prior to the first work term. Transfer students should contact the co-op office as soon as possible and must complete at least one study semester before engaging in a work term. Students transferring from an approved co-op program elsewhere, and who have successfully completed work terms, can receive transfer credit for those work terms up to the point that they still must complete 50% of their degree program, including work terms, here at Simon Fraser University. Students are urged to apply to co-op as early as possible. Students may participate in recommended learning-based and employability skills workshops that improve their chances of successful employment.

Acceptance into the Program
Acceptance into the co-op employment process is based on academic performance and entry interviews 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. Some departments have additional requirements and students should check with their program of interest.

Participation in the Program
The Employment Process
Once a student is accepted into the co-op program and completes the required curriculum, the student can participate in the employment competition. Job opportunities are identified and posted through co-op, students select those for which they wish to compete, they may be selected for interview, and they may or may not receive an offer. They have the option to accept or decline an offer 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 a position is accepted, students are obligated to that work term. Students are required to have a practicum registered with academic records (Student Services) once they have accepted employment.

Application form submission and/or participation in the job competition indicates a commitment to the program and acceptance of the following:

• permission for release to prospective employers of copies of transcript
• agreement to register in the appropriate co-operative education course
• agreement to inform Simon Fraser University of the acceptance of any co-op employment position
• agreement to complete four (five for chartered accountancy) co-op education work terms
• 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 co-ordinators 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.

Specialty Options
Students may also find or create their own opportunities, locally or abroad. Guidance is provided for those seeking their own employment and wishing to count it as a co-op term. Self-initiated jobs must be approved by the co-op program in advance of the work term, and students are required to register and pay for the appropriate co-op practicum.

International co-op opportunities continue to expand, particularly in Asia. Specialty programs such as Co-op Japan enable students to access otherwise difficult and remote job markets. Students are encouraged to contact the international co-op co-ordinators, Tanya Behrisch or Caroline Wakelin at 604.291.5649 for more information.

Work Sequence
Work study charts on the next page show two possible work term and study patterns. An alternating sequence, beginning before year three, provides the best learning structure. Other combinations can be arranged to meet student and employer needs, as long as employer requirements for students in the fall and spring terms are met. Students may not normally end their chosen sequence on a work term. (See samples on the next page.)

Co-op Fees
An application to co-op fee and a registration fee is charged for each four month work practicum in which the student enrols. These fees are tax deductible. For information, see “General Regulations” on page 37.

Graduation Requirements
Four work terms (five for the CA program) 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 is typically full time employment for 13-16 weeks in duration.)
## Certificate Option

Students (except 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>Semester I</th>
<th>Semester II</th>
<th>Semester III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>September to December</td>
<td>January to April</td>
<td>May to August</td>
</tr>
<tr>
<td>1</td>
<td>study semester #1 15 credit hours 15 cumulative credit hours</td>
<td>study semester #2 15 credit hours 30 cumulative credit hours Register for and complete BOL I</td>
<td>study semester #3 15 credit hours 45 cumulative credit hours Co-op program intake BOL II</td>
</tr>
<tr>
<td>2</td>
<td>Work term #1 15 credit hours 60 cumulative credit hours</td>
<td></td>
<td>Work term #2</td>
</tr>
<tr>
<td>3</td>
<td>study semester #5 15 credit hours 75 cumulative credit hours</td>
<td>Work term #3 15 credit hours 90 cumulative credit hours</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Work term #4 15 credit hours 105 cumulative credit hours</td>
<td>study semester #7 15 credit hours 120 cumulative credit hours</td>
<td>study semester #8 15 credit hours 120 cumulative credit hours</td>
</tr>
</tbody>
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<th>Year</th>
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<td>study semester #7 15 credit hours 120 cumulative credit hours</td>
<td>study semester #8 15 credit hours 120 cumulative credit hours</td>
</tr>
</tbody>
</table>
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.
Graduate General Regulations

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. Such dishonesty 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.

The University code of academic honesty is contained in policy T10.01 available in the Library or in the Undergraduate Schedule of Classes and Examinations published every semester, 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, Admissions and Registration
The director is responsible for registration 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
This committee makes recommendations to the senate graduate studies committee on such matters as awarding of degrees, examining committees for doctoral candidates, changes to established programs and establishment of new programs.

Senate Graduate Studies Committee
This committee has the final authority on admissions and the administration of senate regulations which concern graduate work. This committee serves as the graduate program committee for students enrolled under special arrangements.

The administrative officers of the University who are responsible for the supervision of graduate students are the director, graduate admissions, records and registration and the dean of graduate studies. They and the chairs of graduate program committees are available to students for consultation.

Graduate Studies Information
A wide range of additional information on graduate studies at Simon Fraser University may be found on the University’s website (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 sites.

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. Application forms are also available on the Dean of Graduates Studies website.

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, 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,

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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.)

1.3.4 Admission to a Doctoral Program

The minimum University requirements for admission to a doctoral program are as follows.

a) either

i) a master's degree from a recognized university, or the equivalent, or

ii) a bachelor's degree, with a cumulative grade point average of at least 3.5, from a recognized university, or the equivalent, or

iii) completion of at least 75% of the course work credits required for the relevant department's Master's program, with a cumulative grade point average of at least 3.5. All graduate courses, whether taken at this University or another university, shall be considered in the calculation.

b) submitted evidence that the applicant is capable of undertaking substantial original research. Normally, such capability will be judged from letters of reference from qualified referees, and the completion of a master's thesis or other scholarly work.

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 semester.

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 graduate program director. 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 semesters).

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 degree) 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 ready to undertake a program 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 registering in the program, or within the first semester of registration.

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.

1.3.10 Application for Admission

Application forms may be obtained from the Office of the Registrar, from the Dean of Graduate Studies website, or from any department. Completed forms 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 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; 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.
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 registered in a master’s or doctoral program at Simon Fraser University. Certificates are awarded at the time of convocation.

1.4 Registration
Students are registered in one of two different types of programs. In ‘per semester fee’ programs, students are charged a standard fee for each semester of registration. In ‘per credit fee’ programs, students are charged a fee based on the number of credits taken. (See “Graduate Fees” on page 245 for current tuition fee rates.) All students are in per semester fee programs except for students in per credit fee programs as listed under Graduate Fees (page 245).

1.4.1 Date of Entry
University regulations permit graduate students to enter programs at the beginning of any semester, unless a program requires students to start in a specific semester.

1.4.2 Registration
Registration begins two months before the start of each semester 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 registration, without financial penalty. The course or research-related work for which the student registers 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, registration for courses taken outside the student’s department must have the approval of the course instructor. Students going on leave are required to register (see “1.8.4 Application to go on Leave” on page 241).

1.4.3 Continuity of Registration
Students in per semester fee programs are required to register in every semester until all requirements for the degree have been fulfilled. This includes students registered on leave. A student who does not register is considered to have withdrawn from the University. (See 1.8.4 for regulations on student leave.) Students in per credit fee programs register only in those semesters 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 register in at least one of three consecutive semesters is considered to have withdrawn from the University.

1.4.4 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 registration, 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.

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. 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. A grade of 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, admissions and registration by the last day of the first month of the next semester, 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 N will be placed in the student’s record. For the purposes of calculating the CGPA, N counts for 0 points.

A course that is dropped before the end of the second week of the semester 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, admissions and registration.

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 semester grade point average or cumulative grade point average.

1.5.3 Satisfactory/Unsatisfactory Grading (SU)
With the approval of senate graduate studies committee, a department may require that a designated course be graded satisfactory/unsatisfactory (SU) for all students in the course.

An individual student may request to take a course on an SU 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 registered 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:

a) when the same numbered course covers different material in different semesters (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 registration 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 semester of full time equivalent enrolment 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 semester 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:

a) the student is an Simon Fraser University faculty member holding the rank of assistant professor or above (see 1.6.3); or
b) he or she is an Simon Fraser University faculty member designated by the student.

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:

a) successfully complete a minimum of 12 credit hours of graduate course work and submit a thesis;

b) successfully complete a minimum of 20 credit hours of graduate course work and submit at least two extended essays, or a project;

c) successfully complete a minimum of 30 credit hours of graduate course work and pass a final examination

Not all of these options are available for every program. A graduate program committee may require work in addition to the minimum requirements either
on an individual basis or, with Senate ratification, for all students in its program.

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 register for a minimum of five semesters. On leave semesters 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 under these provisions, the student shall maintain normal registration at this University, not registration on leave.

A graduate student may apply to have credit for graduate courses taken prior to admission applied to the requirements for the degree, under the following conditions:

a) Courses must have been taken within two years of starting the Simon Fraser University program

b) Courses may not have been used to earn another credential and may not have been taken as part of a qualifying year

c) application for advance credit must be made at the time of application for admission, and must be approved by the graduate program committee and the dean of graduate studies.

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 graduate program committee shall make a written report to the graduate program committee, and provide a copy to the student. That committee shall consider whether the student's progress has been satisfactory. The graduate program committee, on consultation with the supervisory committee, if one has been appointed, may:

a) require the student to withdraw, or

b) inform the student of the unsatisfactory progress and require the student to improve in specific ways in a specific period of time.

The student concerned has the right to appeal 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 admissions, records and registration. 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 admissions, records and registration.

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 and 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 the chair 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 semester.

Under extenuating circumstances, a student may withdraw from a course without academic penalty during the tenth to the 12th 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, admissions and registration.

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 per semester fee programs.

Students in per semester degree programs are expected to maintain continuous registration (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;

and

b) no substantial use will be made of University facilities.

Permission to register on leave must be approved by the student's supervisory committee and the graduate program committee. Students on leave are required to register during the normal registration period for each semester by indicating on leave status when registering.

Students who wish to register on leave for more than three sequential semesters must submit a written explanation for all subsequent on-leave registrations. 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

Master's Students

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 designee, 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/she 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.

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 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, admissions and registration 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

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 shall 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. 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 the 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 dean of graduate studies only, before the examination. If the report states that the thesis is ready for defence, 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 then forward the report to the external examiner, who shall be asked to discuss the report with the thesis defence committee.

Following discussions with the student and the supervisory committee, the chair of the graduate program committee shall report to the dean whether the thesis 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 thesis 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 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. It will 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 more than two bound copies for departmental files and these should be submitted for binding at the same time.

When the library representative of the dean of graduate studies has checked the thesis and accepted the format, the representative will notify the registrar. No degree will be approved by senate until the registrar has been so notified.
Master's Students

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, MPM, MMP, 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 determining 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 semesters taken under such circumstances will be added to the maximum length of time in program. Students who take on-leave semesters for other reasons will not receive extensions. Students in credit programs do not take on-leave semesters. 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 semester fee programs (see 1.4) shall complete all of the requirements for a master's degree within 12 semesters of equivalent enrollment. On-leave semesters will not be counted as semesters of enrollment. In addition, all requirements of the master's degree must be completed within six calendar years of initial enrolment as a master's student. Students in per credit fee programs (see 1.4) shall complete all of the requirements for a master's degree within six calendar years of initial enrolment.

1.12.3 Doctoral Degree

A student shall complete all the requirements for a doctoral degree within eight calendar years of initial enrolment 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 enrolment as a master's student.

1.12.4 Readmission

Under exceptional circumstances and with the recommendation of the chair of the graduate program committee, 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 semester only to complete those requirements. Final approval for readmission is by the dean of graduate studies.

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 245.

1.14 Convocation Ceremony

Convocation is held twice annually. Graduates from the previous fall and spring semesters convocate in early June, while graduates from the summer semester 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 registration, 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.
**Tuition Fees**

Tuition fee calculation depends upon the program in which a student is enrolled. Most programs require students to register every semester and charge a per-semester fee. Some programs (see Tuition Fee Schedule below) charge a per-credit fee, such that the fee for any semester depends upon the number of credits in which a student enrolls.

**Per Semester Fee Programs**

All graduate students pay a per semester fee, except those students in programs that charge a per credit fee.

The fee is paid every semester, regardless of the number of courses being taken.

**Master’s Program**

The minimum fee for a master’s program is six semester fee units. However, the minimum fee rule will be waived for students who complete all degree requirements in less than six semesters of continuous full time registration.

Students who register on leave are not eligible for the waiver of the minimum fee requirements.

A master’s students who has completed six semesters of registration (excluding on leave registration) pays a continuing fee in subsequent semesters equal to one half of the regular fee.

**Doctoral Program**

A doctoral student who has completed eight semesters of registration (excluding on leave registration) pays a continuing fee in subsequent semesters equal to one half of the regular fee.

Semesters in which a student registers on leave do not count towards the number of semesters required to switch to the continuing fee.

**Co-operative Education**

Students in a co-operative education semester who are taking at least one course pay a per semester 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 register for this and pay the appropriate fee for at least one semester, normally at the end of their program of study. Once they have registered for this requirement in a particular semester, they must register in all subsequent semesters until degree requirements have been completed. In the subsequent semesters of registration for this requirement, the credit hours assigned will be half the first semester’s value.

Students in co-operative education semesters 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 Wester 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.

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<td>Faculty of Health Sciences</td>
</tr>
<tr>
<td>Master of Population and Public Health</td>
</tr>
<tr>
<td>Master in Global Health</td>
</tr>
<tr>
<td>Graduate Diploma in Global Health</td>
</tr>
</tbody>
</table>
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: $145.20.

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 semester.

Extension and Readmission

Students in per-semester fee programs

All students registered for a one semester extension beyond the maximum time limits of their program pay the full per semester fee.

All students readmitted for one semester to complete their degree requirements (see “1.12.4 Readmission” on page 233) pay the full per semester fee.

Students in per-credit fee programs

Students registered for a one semester extension beyond the maximum time limits of their program, or readmitted for one semester 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 39.

Student Activity Fee

Students on leave do not pay this fee. For further information, see “Student Activity Fee” on page 39.

For a breakdown of the student activity fee, see “Simon Fraser Student Society” on page 458.

Special Fees

Application $75.00
On Leave $184.50
(see Graduate General Regulations)
Reinstatement $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 semesters of registration in the graduate program.

Replacement Library Card


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 39.

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 student graduate (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 semester 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 benefits start date, and are as follows:

September (fall semester) — September 30 at 4 pm
January (spring semester) — January 30 at 4 pm
May (summer semester) — 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, telephone 604.268.6994, fax 604.268.7195, benefitplan@sfss.ca

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. 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, and is also published in the Graduate Course Timetable. 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Fees</th>
</tr>
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<tbody>
<tr>
<td>BISC 600</td>
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<tr>
<td>BISC 812</td>
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Earth Sciences

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<td>BISC 603</td>
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<tr>
<td>EASC 606</td>
<td>up to $55</td>
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<tr>
<td>EASC 611</td>
<td>up to $150</td>
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<tr>
<td>EASC 613</td>
<td>up to $30</td>
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<tr>
<td>EASC 617</td>
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<td>EASC 812</td>
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</tbody>
</table>

Geography

<table>
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<th>Fees</th>
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<td>GEGG 612</td>
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</tr>
<tr>
<td>GEGG 628</td>
<td>up to $50</td>
</tr>
</tbody>
</table>

Marine Science

All MASC courses offered at the Western Canadian Universities Marine Biological Station (Bamfield) $137 per credit hour

Resource and Environmental Management

REM 689 $150 per semester

Time of Payment

In order to register, students must have a credit balance of at least $100 in their accounts. Students must be registered for the semester before any payment of graduate awards can be made in that semester. 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 registered.

See “Payment of Fees” on page 40 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 semester, refunds will be calculated from the date the student officially notifies the registrar in writing of his/her withdrawal from the University. Withdrawals in the first month of the semester 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 semester. Mid-semester changes are not permitted.

Overdue Accounts
Students in bad financial standing because of overdue University accounts will be precluded from registering in subsequent semesters. In addition, the University will withhold certain services. For example, the Director, Graduate Admissions, Records and Registration will not release various letters and documents including: statement of grades, official transcripts of academic record, and parchments for degrees, diplomas and certificates. Delinquent accounts will be forwarded to a collection agency for appropriate action.

Students with overdue accounts will be assessed a penalty of 2% after the first day of the fifth week of classes, and an additional 2% in each four week period thereafter. A minimum charge of $10 will apply to each penalty assessment. Total penalties will be adjusted to conform to Canadian laws and regulations when the final payment is made.

Course Drop
Students in per-semester 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 semester 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-credit programs who wish to drop all courses should first contact the Director, Graduate Records, Admissions and Registration 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 semester 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 semester, the following refund schedule for tuition fees payable in that semester will apply. No other fees are eligible for refund.

Completion in the first month of the semester
Refund of 75% of fees payable for the semester.

Completion in the second month of the semester
Refund of 50% of fees payable for the semester.

Completion in the third month of the semester
Refund of 25% of fees payable for the semester.

Refunds to students in per semester 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 semester 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 registered 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 semester will be decreased by this amount. The Simon Fraser University fee paid for that semester will be refunded to an amount not to exceed the lesser of the two amounts.

A student in a per semester fee program must maintain registration at Simon Fraser University, and may not register on leave. A student is a per credit fee program must register for the same number of credits at Simon Fraser University as are to be taken at the other institution.

Full Time and Part Time Attendance
All graduate students in per semester fee programs are considered full time students.

All graduate students registered for thesis, project or field exams are considered full time students.

Graduate students in per credit fee programs who register for six or more credit hours in a semester are considered full time students.

Tuition Fee Certificates (T2202A)
See "Tuition Fee Certificates (T2202A)" on page 41.
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: 604.291.4356. 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 international 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-graduatestudies/finaid.htm

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 248)
- Awards for New and Continuing students (page 250)
- Private Awards (page 250)
- University Administered External Awards (page 255)
- Externally Administered Awards (page 256)

Awards, bursaries and loans administered by Financial Assistance, Academic Resources:

- Bursaries Administered by the University (page 257)
- Bursaries for All Students (page 257)
- Bursaries for Applied Sciences Students (page 259)
- Bursaries for Arts and Social Sciences Students (page 259)

- Bursaries for Business Administration students (page 259)
- Bursaries for Education Students (page 260)
- Bursaries for Science Students (page 260)

International Students

Students who are not Canadian citizens and who would require financial assistance to attend Simon Fraser University must seek such assistance in their country of origin before arrival in Canada. Many of the outside awards are restricted to Canadian citizens or permanent residents. However, foreign students are eligible for most awards granted by the University when they have been 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 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.
- The individual graduate 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 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 Assistance and Awards” on page 42.

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
Tenable: Fall term
Terms of reference: For a full-time student entering the Master of Risk Management program.

ASI Graduate Student Awards

Value: $10,000 each
Application deadline: September 1 (by nomination)
Tenable: Fall term
Terms of reference: Five awards to outstanding Canadian students entering a new graduate program in an advanced systems discipline such as information technology, micro electronics, robotics and/or telecommunications. Students must be nominated by their intended department of enrolment to the Director of the Centre for Systems Science.

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Externally Administered Awards 256
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University Administered Loans 260
Work-Study Program 260
Government Administered Programs 260
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International Students 262
Wm. F. and Ruth Baldwin Graduate Scholarship in History
Value: $8,000
Application deadline: March 15
Tenable: Any semester
Terms of reference: One award for a student entering the Master of History program. Preference is given to a student entering any Simon Fraser University graduate program. One scholarship is available each year to full time students pursuing a degree in History.

Gary Brent Global Asset and Wealth Management Scholarship in Business Administration
Value: $10,000
Application deadline: May 30 and/or September 30
Tenable: Three consecutive semesters
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. Each 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: $1,200
Application deadline: March 15
Tenable: Any semester
Terms of reference: An award for a student entering a 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 semester
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: Fall semester
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 semester
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 semester
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 semesters 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 semester
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 semesters
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 semester.

C.D. Nelson Memorial Graduate Scholarships
Value: $18,000
Application deadline: March 15
Tenable: Three consecutive semesters
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 semester.

Master of Pest Management Graduate Entrance Scholarship
Value: $500
Application deadline: March 15
Tenable: Fall semester
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 semester
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 semester
Terms of reference: One award for a student from the University College of the Fraser Valley entering the BSc 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 semesters
Terms of reference: The recipient is an outstanding student who has received a previous degree at a Canadian institution and is entering any Simon Fraser University graduate program. One award is made. Tenure is for one year and may commence in any semester.

Simons Foundation Doctoral Entrance Fellowship (for Women)
Value: $17,000
Application deadline: March 15
Tenable: Three consecutive semesters
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 semester.

O.H. Sorila Memorial Graduate Scholarship in Philosophy
Value: $500
Application deadline: March 15
Tenable: Fall semester
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 semester
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 semester, by nomination
Terms of reference: One award for a student entering the Department of History.

William and Ada Isabelle Steel Memorial Graduate Scholarship
Value: $17,000
Application deadline: March 15
Tenable: Three consecutive semesters
Terms of reference: The recipient is an outstanding full time student in any Simon Fraser University graduate program whose research takes place outside the lower mainland of BC. One award (of which $2,000 of the award value is targeted for travel, accommodation and related research expenses) is available each year. Tenure is for one year and may commence in any semester.

Dorothy Middler Thomas Graduate Entrance Scholarship in English
Value: $500
Application deadline: March 15
Tenable: Any semester
Terms of reference: One award for a student entering a graduate program in the Department of English.

Doreen Wilkinson Memorial Graduate Scholarship in Economics
Value: $1,500
Application deadline: March 15 (by nomination)
Tenable: Any semester
Terms of reference: One or more scholarships will be awarded to graduate students entering the doctoral program in Economics. The fund honors Doreen Wilkinson, Economics Department Assistant, friend and mentor to many. Students must be nominated by the department by March 15.

Grace Woodsworth MacInnis Graduate Award
Value: $2,000
Application deadline: March 15
Tenable: Any semester
Terms of reference: Established in honour of 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: $6,000
Application deadline: April 15
Tenable: Any semester
Terms of reference: These are one semester awards valued at $6,000. Students may apply in an annual competition for graduate fellowships tenable in one, two or three semesters.
Faculty of Applied Sciences Dean's Fund Graduate Fellowships
Value: $3,000
Application deadline: April 15
Tenable: Any semester, subject to funding
Terms of reference: These are one semester 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 3.5 cumulative grade point average) and good standing in research ability. This 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: $6,000
Application deadline: end of the second month of the semester preceding the semester of tenure.
Tenable: Any semester
Terms of reference: These are one semester 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

J. Abbott/M. Fretwell Graduate Fellowship in Fisheries Biology
Value: $4,000
Application deadline: September 30
Tenable: January
Terms of reference: One fellowship to a graduate student showing 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 1988.
Access Copyright Graduate Award in Publishing Studies
Value: $1,800
Application deadline: September 30
Tenable: January
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: $300
Application deadline: September 30

Tenable: January
Terms of reference: One award to assist a graduate student in psychology with the development of a publishable standardized test.
Archeomery Prize
Value: $200
Application deadline: April 15
Tenable: summer
Terms of reference: A prize will be awarded annually in the summer semester. 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 Benston Student Services Centre.
Association of Women in Finance Graduate Scholarship
Value: $1,500
Application deadline: May 30 (by nomination)
Tenable: Fall semester
Terms of reference: A one-semester 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.
BCAA Environmental Studies in Transportation Award
Value: $700
Application deadline: September 30
Tenable: January
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
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: September and January
Terms of reference: One or more, one-semester awards supported by the Anne 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 semester
Terms of reference: An annual prize with accompanying certificate will be awarded during May each year to the outstanding graduate from the master of pest management program in the three semesters 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 in consultation, as necessary, with faculty. 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: September
Terms of reference: A one semester award for students in the MA or PhD program in Women's Studies, with demonstrated financial need.
Alan Boag Scholarship
Value: $2,000
Application deadline: September 30
Tenable: January (in even numbered years)
Terms of reference: This bi-annual scholarship is the gift of the trustees of a fund established by the late Alan Boag. It is available to graduate students in business administration, economics, history, political science, sociology and anthropology who have completed two semesters of full time study at the University.
Applicants must submit a superior essay on some aspect of socialism which shows originality in analysis and treatment of the area. Students are advised to consult with faculty regarding the suitability of the proposed essay subject. No award will be made if, in the opinion of the referees, a suitably high standard has not been reached.
Boag Foundation Graduate Scholarship in Women's Studies
Value: $2,000
Application deadline: September 30
Tenable: January (in odd numbered years)
Terms of reference: One award bi-annually for a graduate student in Women's Studies. Submission of a superior report/essay on any topic concerning feminist socialist issues is required. Special consideration given for originality in analysis and treatment of the area.

Gene Bridwell Graduate Scholarship in Special Collections
Value: $1,000
Application deadline: October 15
Tenable: January
Terms of reference: An award for a graduate student at SFU or enrolled at a university outside the Lower Mainland who shows evidence of 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.
Phyllis Carter Burr Graduate Scholarship in Developmental Biology and Cell Biology
Value: $750
Application deadline: September 30
Tenable: any semester
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: $700
Application deadline: September 30
Tenable: January
Terms of reference: One scholarship for a graduate student in Communication specializing in communication policy.
Canadian Fishing Company Graduate Scholarship
Value: $1,500
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.

**Canron Limited Sidney Hogg Memorial Graduate Scholarship**

Value: $650

Application deadline: September 30

Tenable: January

Terms of reference: Canron Limited has established a scholarship in memory of the late Mr. Sidney Hogg, a Convocation founder of Simon Fraser University. This annual scholarship will be awarded to a worthy and deserving student in postgraduate studies in physics. The spirit of this scholarship is to assist a student who requires financial aid to continue studies and who, at the same time, qualifies in terms of character and scholarship as determined by the Physics Department and the Senate Graduate Awards Adjudication Committee.

**CanWest Global Graduate Fellowship in Communications**

Value: $10,500

Application deadline: September 30

Tenable: two consecutive semesters

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: any semester

Terms of Reference: A one-semester award for outstanding Canadian students in their second year of a graduate program, master’s or doctoral, in the Faculty of Applied Sciences.

**Chemistry Alumni Graduate Scholarship**

Value: varies

Application deadline: September 30 (by nomination)

Tenable: any semester

Terms of Reference: Awards equal to one semester'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: $300

Application deadline: May 30

Tenable: September

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 semester

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: January

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: $500

Application deadline: September 30

Tenable: Spring semester

Terms of reference: One award for a graduate student who is pursuing, or intends to pursue, a graduate degree in history or archaeology.

**Barry Clark Memorial Graduate Scholarship in Pre-Twentieth Century English Literature**

Value: $1,000

Application deadline: September 30

Tenable: January

Terms of reference: One award for a graduate student in English, specializing in pre-twentieth century English literature.

**C/N/O Segal Graduate Entrepreneurship Award In Business**

Value: varies

Application deadline: September 30 (by nomination)

Tenable: January

Terms of reference: A one semester 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: September

Terms of reference: One award to provide financial support for a graduate student focussing 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.

**COCGCO Graduate Scholarship in Communications**

Value: $12,000

Application deadline: September 30

Tenable: January and May

Terms of reference: One two-semester award for a graduate student in Communication.

**Samuel and Leatrice Cohen Prize in Environmental Physiology**

Value: $600

Application deadline: September 30

Tenable: January

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: May

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: May

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: May or January

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.

**Isabel Dawson Memorial Scholarship in Gerontology**

Value: $1,500

Application deadline: September 30

Tenable: January

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: January

Terms of reference: A one-semester 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 Diewert Graduate Scholarship in Economics**

Value: $1,000

Application deadline: May 30

Tenable: September

Terms of reference: Awarded to a graduate student on the basis of high academic performance and study in the area of decision learning in economics. This fund has been established in honor of Dr. Gordon Diewert for his contribution to the School of Economics at Simon Fraser University.

**Downtown Vancouver Association Graduate Awards in Urban Studies**

Value: varies

Application deadline: May 30 (by nomination)

Tenable: September

Terms of reference: A one-semester 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

Terms of reference: A one-semester 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, Mayor of the City 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: $500

Application deadline: September 30 (by nomination)

Tenable: January

Terms of reference: A one-semester 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, ageing, 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 semesters 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 this award by the Academic Director of the Program.
Robert Hancock Dunham Memorial Scholarship in English
Value: $3,500
Application deadline: June 30
Tenable: Fall
Terms of reference: One award for a student pursuing a graduate degree program 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: September and January
Terms of Reference: A two-semester 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.

Ebsco/Epic Graduate Scholarships in Expert Systems
Value: $700-$1,400 each
Application deadline: September 30 (by nomination)
Tenable: January
Terms of reference: One or more scholarships valued between $700 and $1,400 each are available to graduate students in the Centre for Systems Science. These are:
- The Epich Family Graduate Scholarship
- The Helmut Epich Graduate Scholarship
- The Hugo Epich Graduate Scholarship
- The Gordon, Monica, and Sonia Epich Graduate Scholarship
- The Kaltenegger Family Graduate Scholarship
- The Richard M. Howatt Family Graduate Scholarship
- The Century 21/Charwood Family Graduate Scholarship
- The Frieder Karl Kempe Graduate Scholarship
- The Cy and Emerald Keyes Graduate Scholarship
- The Franklin D. and Helen K. Van Pykstra Graduate Scholarship
- The Bel Construction Ltd. Graduate Scholarship
- The BC Welding Supplies 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 Transco Tool and Equipment Ltd. Graduate Scholarship
- The ABC Recycling Ltd. Graduate Scholarship
- The Robar Industries Limited Graduate Scholarship
- The Opus Building Corporation Graduate Scholarship
- Borden Ladner Gervais Graduate Scholarship
- The Pacific Metals/Leon Lotzkar 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 Scholarship

Students are nominated for these awards by the director of the Centre for Systems Science.

Application deadline: September 30.

Editors’ Association of Canada/Association Canadienne de Reviseurs, BC Branch Graduate Scholarship in Publishing Studies
Value: $2,500
Application deadline: May 30
Tenable: September
Terms of reference: A one-semester 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.

Emergency Preparedness Conference Scholarship in Emergency Communications
Value: $2,000
Application deadline: September 30
Tenable: January
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.

Executive MBA Alumni Scholarship
Value: $500-$2,500 each
Application deadline: September 30, January 30, May 30
Tenable: January, May, September
Terms of reference: One or more scholarships awarded to graduate students in the first, second, or third years of the Executive Master of Business Administration program (EMBA).

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 semester preceding the semester of tenure
Tenable: any semester
Terms of Reference: A one-semester 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. Fattah Graduate Scholarship in Criminology
Value: $2,000
Application deadline: September 30
Tenable: January
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 Fauquenoy Graduate Scholarship in French
Value: $500
Application deadline: September 30 or January 30
Tenable: January or May
Terms of reference: One award to a graduate student who has completed at least one semester of graduate work at Simon Fraser University in the area of French linguistics, varieties of French, French-based Creoles, French literature, or French studies.

Professor Thelma Finlayson Fellowship
Value: $4,000
Application deadline: September 30
Tenable: January
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: September
Terms of reference: One award for a graduate student in French.

Mahatma Gandhi Memorial Scholarship in Kinesiology
Value: $700
Application deadline: January 30
Tenable: May
Terms of reference: A scholarship will be awarded to a Kinesiology 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: January
Terms of reference: The scholarship is to be awarded to a graduate student in Biological Sciences with a concentration on marine biology.

German Canadian Benevolent Society of British Columbia Aulinger Award in Gerontology
Value: $600
Application deadline: September 30
Tenable: January
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.

Sidney Hogg Memorial Graduate Scholarship
Value: $750
Application deadline: September 30
Tenable: January
Terms of reference: Mrs. Sidney Hogg has established an endowment, the earned income therefrom to provide a perpetual scholarship annuity. 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.

Imperial Order of the Daughters of the Empire Seaman Morley Scott Memorial Graduate Scholarship
Value: $300
Application deadline: September 30
Tenable: January
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 merititious performance in her academic program.

International Reading Association Scholarship
Value: $700
Application deadline: January 30
Tenable: May
Terms of reference: One scholarship awarded to a full or part time graduate student pursuing studies in literacy education.
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Daniel Janzen Memorial Graduate Scholarship
Value: varies
Application deadline: September 30
Tenable: January
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: January
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.

Dr. Tai Whan Kim Memorial Graduate Scholarship in Languages and Linguistics
Value: $1,000
Application deadline: May 30
Tenable: September
Terms of reference: One award for a graduate student pursuing a master's or PhD 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: September
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 Columbian history.

Law Foundation Graduate Scholarship in Restorative Justice
Value: $2,500
Application deadline: May 30 (by nomination)
Tenable: September
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: September
Terms of reference: A one semester 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.

Frank A. Linville Graduate Scholarship in Sensory Science
Value: $6,000
Application deadline: May 30
Tenable: Fall
Terms of reference: One semester awards for students pursuing a graduate degree program whose research is on sensory science. Award criteria include demonstrated academic excellence and promise of outstanding achievement at the graduate level, with particular emphasis on intellectual ability, originality and ability in research.

H.R. MacCarthy Graduate Bursary
Value: $6,000
Application deadline: September 30
Tenable: Fall
Terms of reference: The H.R. MacCarthy 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: January
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: January
Terms of reference: One or more scholarships for Doctoral Philosophy students carrying out research in the Department of Molecular Biology and Biochemistry.

Marie Magrega Memorial Graduate Award in Gerontology
Value: $5,000
Application deadline: September 30
Tenable: any semester
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 registered in the MA program in Gerontology. The student must be nominated by the Director of the Gerontology Program.

Management of Technology MBA Graduate Scholarships
Value: $10,000
Application deadline: by nomination
Tenable: any semester
Terms of reference: Two scholarships per calendar year, to full time students entering the accelerated cohort after a minimum of two years of employment in the high-tech industry in a professional capacity. Students must be nominated by the Academic Director of the Management of Technology Program to the Dean of Graduate Studies.

Temple Maynard Graduate Scholarship in English
Value: $10,000
Application deadline: May 30 (by nomination)
Tenable: two consecutive semesters
Terms of reference: One or more scholarships will be awarded to students in a graduate program in English.

Temple Maynard Memorial Graduate Bursary in English
Value: $2,000
Application deadline: May 30
Tenable: September
Terms of reference: One bursary for a graduate student in English.

MBB Alumni Graduate Scholarship
Value: varies
Application deadline: September 30
Tenable: any semester
Terms of reference: One award for a graduate student who is in the first nine semesters of a master's program or in the first 15 semesters of a doctoral program and who is conducting research in molecular biology and biochemistry.

Catherine Ann McKay Publishing Award
Value: $1,000
Application deadline: March 15 (by nomination)
Tenable: May
Terms of reference: Registration in the Master's of Publishing program. One award to defray a student's expenses incurred while participating in the internship component of the program.

Colin McPhee Graduate Scholarship in Fine Arts
Value: $4,400 for a master's student, $5,000 for a doctoral student
Application deadline: April 15
Tenable: September
Terms of reference: A one-semester award for a student pursuing a graduate degree in any art discipline in the School for the Contemporary Arts. A student who applies for a Graduate Fellowship will automatically be considered for this scholarship.

Ann and William Messenger Graduate Fellowships in English
Value: $7,000
Application deadline: May 30 (by nomination)
Tenable: September or January
Terms of reference: A one semester award for student(s) pursuing a graduate degree (M.A. or Ph.D.) in English. Up to three awards will be granted in a given year. Students must be nominated for this award by the Chair of the Department.

Methanex Graduate Scholarship in International Marketing
Value: $5,000 per year
Application deadline: by nomination by January 30
Tenable: May
Terms of reference: One award per year to an outstanding student pursuing a Specialist Master of Business Administration degree with a focus on international marketing.

Mutual Fire Insurance Company of B.C. Graduate Scholarship in Biological Sciences
Value: $5,000
Application deadline: September 30 (by nomination)
Tenable: January
Terms of reference: A one semester award for a student pursuing a Master's or Ph.D. degree in Biology with a focus on research applicable to British Columbia's poultry, dairy, ranch and/or crop agricultural industries. The student must be nominated for this award by the Chair of the Department.

R. Jack Nance Memorial Graduate Scholarship in Archaeology
Value: $500
Application deadline: September 30
Tenable: January
Terms of reference: A one semester award for a student pursuing a graduate degree in Archaeology who has completed at least one semester of their graduate program.

National Council of Jewish Women (Vancouver Section) Graduate Scholarship in Women's Studies
Value: $700
Application deadline: September 30
Tenable: January
Terms of reference: One scholarship of approximately $700 for a graduate student in the first, second or third semester of women's studies.

Hemingway Nelson Architects Graduate Scholarship
Value: $1,500
Application deadline: September 30
Tenable: January
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: January
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: Tenable to a maximum of $700
Application deadline: one month prior to proposed travel date
Tenable: any semester
Terms of reference: Applicants must be registered 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 registration fees only.

Dr. M. Sheila O'Connell Graduate Scholarship in Children's Literature
Value: $1,500
Application deadline: September 30 (by nomination)
Tenable: January
Terms of reference: One scholarship will be awarded in the spring semester 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.

Anne Peters Pinto Graduate Scholarship in Women's Studies
Value: $1,500
Application deadline: September 30
Tenable: January
Terms of reference: One award for a graduate student in Women's Studies.

Petro-Canada Graduate Scholarship in Earth Sciences
Value: $3,000
Application deadline: September 30
Tenable: January
Terms of reference: One scholarship to a student pursuing a graduate degree in earth sciences in the Faculty of Science.

Pivotal Scholarship for the Management of Technology MBA Program
Value: $10,000
Application deadline: September 30 (by nomination)

Tenable: January
Terms of reference: One scholarship to attract and provide financial support for a student entering the Management of Technology MBA Program. Candidates must have a minimum of two years of employment experience in the high-tech industry in a professional capacity. Applicants must be nominated for the award by the Academic Director of MBA Programs and the Associate Dean in the Faculty of Business Administration.

Dr. L. B. Peter Rae Memorial Award in Business Ethics
Value: $1,000
Application deadline: September 30
Tenable: January
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.

Rogers Communications Inc. Graduate Scholarship in Communication
Value: $4,000
Application deadline: September 30
Tenable: January
Terms of reference: One or more scholarship(s) awarded 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: January
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: September
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 & 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: January
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: May
Terms of reference: One or more awards for graduate students in History.

Scotiabank Global Asset and Wealth Management MBA Scholarship in Business Administration
Value: $5,000
Application deadline: May 30 and/or September 30 (by nomination)
Tenable: September, January or May
Terms of reference: One award per year disbursed over three semesters to a full-time student entering the Global Asset and Wealth Management (GAWM) MBA program after having spent a minimum of two years employed in the financial services industry in a professional capacity. Students must be nominated for the award by the Academic Director of the GAWM Program.

Scotiabank Graduate Scholarship for Women Entrepreneurs
Value: $12,000
Application deadline: September 30
Tenable: Spring and Summer semesters
Terms of reference: A two-semester award for a graduate student pursuing a master's degree in business administration 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: September
Terms of reference: A one semester 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: September and January

Terms of reference: A two-semester scholarship tenable in the fall and spring semesters, for a graduate student enrolled in the Natural Resources Management Program who is researching environmental and resource management problems in British Columbia.

Viswanathan-Delord Graduate Endowment Fund  
Value: $500  
Application deadline: January 30 or May 30  
Tenable: September or May

Terms of reference: One award for a graduate student working in the area of French literature.

Linda Waddell Memorial Scholarship in Publishing Studies  
Value: $2,000  
Application deadline: May 30  
Tenable: September

Terms of reference: Sponsored by Penguin Canada for a student pursuing a master’s degree in Publishing Studies.

Lis Welch Graduate Scholarship in Education  
Value: $2,800  
Application deadline: September 30  
Tenable: Two consecutive semesters

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: September, January and May

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: January

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: May

Terms of reference: One scholarship to a graduate student in Economics who has completed one semester of graduate work and is a citizen of an Asian developing country.

Lang Wong Memorial Endowment Scholarship in Engineering  
Value: $1,000  
Application deadline: January 30  
Tenable: May

Terms of reference: One scholarship awarded annually to a graduate student in Engineering who has completed one semester 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: September

Terms of reference: One award for a graduate student in the Master of Pest Management Program specializing in crop protection, plant pathology and nematology.

University Administered External Awards

Canadian Institutes of Health Research (CIHR)  
Value: $17,500/year  
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 a 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 registered for no 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  
Tenable: Annual

Terms of reference: Eight 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 done 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: $7,500  
Application deadline: February 1  
Tenable: Annual

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  
Tenable: Annual

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 relations or industrial relations in the United States or the United Kingdom. Deadline: February 1 to Dean of Graduate Studies.

Natural Sciences and Engineering Research Council Awards  
Value: varies (see below)  
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 residents in Canada are eligible. Four categories of post-graduate awards are available:

NSERC PGS M  
Value: $17,300 for one year  
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: $17,300 for one year  
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 D  
Value: $21,000/year  
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 PGS D  
Value: $25,000/year  
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 Industrial Post-graduate Scholarships (IPS)  
Value: varies (see below)  
Deadline: May 30  
Tenable: May

Terms of reference: 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 students 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  
Deadline: May 30  
Tenable: September, January, May during the first three years of post-graduate study

IPS 2  
Value: $15,000 per year for up to two years plus company contribution of $6,000 minimum per year  
Deadline: May 30  
Tenable: September, January, May during the second and third years of post-graduate study

IPS 3  
Value: $10,000 per year for up to two years plus company contribution of $5,000 minimum per year  
Deadline: May 30  
Tenable: September, January, May during the fourth and fifth years of post-graduate study

IPS 4  
Value: $10,000 per year for up to two years plus company contribution of $5,000 minimum per year  
Deadline: May 30  
Tenable: September, January, May during the fifth and sixth years of post-graduate study

Northern Scientific Training Program (NSTP)  
Value: varies (see below)  
Deadline: October 15  
Tenable: May

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  
Value: $20,000 per year stipend  
Deadline: November 1 if available (approximate in last few years)

Terms of reference: 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. Application forms, guidelines and information regarding eligibility are also available for download from the MSFHR website located 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 not have 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.

DCGS Doctoral Fellowships
Value: $20,000 per year

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.

BC Medical Services Foundation Predoctoral Fellowships

Value: $20,000
Application deadline: April 26
Tenable: three consecutive semesters
Terms of reference: For outstanding new research scientists in the health sciences, for the first or second year of doctoral studies in any discipline (gerontology, kinesiology, psychology, education). Application forms are available at www.vancouverfoundation.bc.ca.

Canadian Federation of University Women Fellowships

Application deadline: January 11
Tenable: Summer semester
Terms of reference: Award 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 History of University Women Fellowships

Application deadline: November 15
Tenable: one year
Terms of reference: One fellowship of $10,000 is awarded annually to a pre-doctoral woman scholar in any field of study (master’s degree or equivalent); at least one year into doctoral program; may be studying abroad.

Professional Fellowship
Value: $5,000
Application deadline: November 15
Terms of reference: This fellowship of $5,000 is open to any woman who has completed a bachelor’s degree from a Canadian university and who is enrolled in graduate work below the PhD level at an accredited professional school. One Professional Fellowship is awarded. The student may be studying abroad.

Alice E. Wilson Grants
Value: $1,000
Application deadline: November 15
Terms of reference: Three grants of $1,000 each are to assist in researcher work, specialized study, or training in new techniques. Applicants must have a bachelor’s degree or equivalent from a recognized university. Deadline: November 15.

Margaret Dale Philip Award
Value: $1,000
Application deadline: November 15
Terms of reference: This work of $1,000 is open to any woman scholar who holds a bachelor’s degree from a Canadian university, who resides in Canada and who wishes to embark on, or continue a program leading to an advanced degree in the field of humanities or social sciences. Special consideration will be given to candidates who wish to specialize in Canadian history. Deadline: November 15.

International Federation of University Women
Value: varies
Application deadline: November 15
Terms of reference: Research fellowships, grants and bursaries. Applicants must be members of CFUW.

Deadline: approximately November 15. For detailed information contact: International Federation of University Women, 37, Quai Wilson, CH 1201, Geneva, Switzerland.

Commonwealth Scholarship Plan

Value: varies
Application deadline: October
Tenable: two years
Terms of reference: The Commonwealth Scholarship and Fellowship Plan offers awards to graduate students in Commonwealth countries to pursue advanced degrees. They are normally tenable for two years in any of the following countries: Australia, Ghana, Hong Kong, India, Jamaica, Malaysia, New Zealand, Nigeria, Sri Lanka, Trinidad and Tobago, Uganda, United Kingdom.

J. Armand Bombardier Internationalist Fellowships (formerly Célanese Canada Internationalist Fellowships)

Value: $10,000
Application deadline: March 1
Tenable: one academic year
Terms of reference: Fellowships to Canadians and permanent residents of Canada who wish to pursue studies, conduct research, or work abroad to develop their international awareness. A key objective is to further Canada’s participation in the world economy. Targeted at outstanding university graduates of proven academic merit in any discipline and demonstrated personal suitability. Applicants must hold at least one university degree (no longer than five years from the date of application), or are currently in the final year of a degree program.

Fellowships are non-renewable. Information and application forms are available through the Office of the Dean of Graduate Studies, MBC 1100. For full information about these awards, visit the J. Armand Bombardier Internationalist Fellowships website at www.cbie.ca/

International Development Research Centre Scholarship

Value: $20,000
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.

OMAE Calgary Chapter (ASME) Graduate Scholarship

Value: $2,000 – $4,000
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: $20,000
Application deadline: March 31
Tenable: Any semester
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: March 31. Applications are available in the Office of the Dean of Graduate Studies. All enquiries, applications and all documents pertaining to this scholarship must be forwarded directly to the Chief of Protocol, Ministry of Finance and Corporate Relations, Parliament Buildings, Victoria, BC, V8V 1X4.

Rhodes Scholarships

Value: $12,000
Applicant 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: $5,000
Applicant deadline: January 31

Tenable: May

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: registered in a graduate program or accepted for the final year of a four year undergraduate program. Must be Canadian citizens or permanent residents. For further information contact the Dean of Graduate Studies Office.

J.H. Stewart Reid Memorial Fellowship

Value: $5,000
Applicant 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 from the Office of the Dean of Graduate Studies. Web: stewartreid.ca/ut

Carl H. Westcott Memorial Fellowship

Value: $5,500
Applicant deadline: June 26

Terms of reference: One scholarship is awarded annually to a student whose research work is being carried out at TRUUM or on TRUUM related projects. For further information contact the Dean of Graduate Studies Office.

International Federation of University Women

Value: varies
Applicant deadline: November 15

Terms of reference: Research fellowships, grants and bursaries. Applicants must be members of CFUW. For detailed information contact: International Federation of University Women, 37, Quai Wilson, CH 1201, Geneva, Switzerland.

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 semester.

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 registered for residence credit in an approved full time program for the semester of application. Students who do not register 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 before a cheque for the credit balance is issued.

• Bursaries are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, 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 students with university studies which will qualify them for careers serving others by improving the quality of their lives.

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 semester based on financial need and satisfactory academic standing. Other bursaries valued approximately at one semester’s tuition are available to students from any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds before a cheque for the credit balance is

Burrard Charitable Foundation Bursary

Program code: GPBO-554
Value: 750
Awarded: Fall
Terms of reference: To a hard-working and deserving female student in need of financial assistance.

The Honourable Angelo E. Branca and Mrs. Branca Bursary

Program code: GEBO-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 semester’s tuition are available to students from any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.

Bursaries to students who have critical financial need.

Other bursaries valued approximately at one semester’s tuition are available to students in any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.

Alex W. Fisher Bursary

Program code: GEBO-596
Value: 500
Awarded: Fall Spring Summer
Terms of reference: To a student with any physical disability. Adjudication will occur in consultation with the Physically Challenged Students’ Co-ordinator.

Lois M. Fisher Bursary

Program code: GEBO-597
Value: 500
Awarded: Spring
Terms of reference: To a hard-working and deserving male student in need of financial assistance. Donation 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: GPBO-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: 100
Awarded: Summer

The Bursary Endowment Fund has been established in honor of Father Della-Torre for his 27 years of pastorate at the Sacred Heart Church, Vancouver. The fund will provide annual bursaries in perpetuity from the earned income.

The Honourable Angelo E. Branca and Mrs. Branca Bursary

Program code: GEBO-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 semester’s tuition are available to students from any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.

Other bursaries valued approximately at one semester’s tuition are available to students in any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.

Other bursaries valued approximately at one semester’s tuition are available to students in any faculty, who have a minimum of 60 credit hours at Simon Fraser University. The funds are tenable only for the semester indicated on the notice and may not be deferred. Students who do not register in the semester for which the bursary is granted forfeit the award. To be considered for bursaries in future semesters of registration, students must reapply.
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 Matusick Family Studies Bursary
Program code: GEB0-708
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: 500
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 semester to students in good academic standing who have special circumstances requiring financial support unavailable from a sponsoring organization, current income or assets.

Jo-Ann Mychaluk Bursary
Program code: GEB0-602
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: GEB0-735
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: GEB0-737
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.

Opsimath Club Bursary
Program code: GEB0-603
Value: 750
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: GEB0-685
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.

William and Jane Saywell Bursary
Program code: GPBO-882
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: GEB0-804
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.

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 Summer
Terms of reference: An award of $2,000 per semester for one year may be made by the University to a disabled graduate student. The applicant must be a full-time registered 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 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: GUBO-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.

Jennifer Allen Simons Bursary
Program code: GEB0-669
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 semester at Simon Fraser University as a full-time student.

Harry and Dora Annie Smee Bursary
Program code: GEB0-606
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: 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: GEB0-738
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.

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 semester 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: GPBO-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 Foundation First Nations Bursary
Program code: GEB0-697
Value: 500
Awarded: Fall
Terms of reference: Bursaries will be available annually in the fall semester 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: GEB0-705
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: GUBO-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 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
Terms of reference: To undergraduate or graduate students in the School for the Contemporary Arts, and must demonstrate financial need and a high level of achievement in the Arts.

**Charles Drugan & Rose Anne Doohan 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 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.

**Anic 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 semester 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. 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.

**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 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: GUBO-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 Spring Summer
Terms of reference: Bursaries will be offered based on 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 Spring Summer
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 semester 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 Spring
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 Spring Summer
Terms of reference: Bursaries are available for students of the Executive Master of Business Administration and who have demonstrated financial need. Bursaries will be awarded each semester 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.

**Aird Dundas Flavelle Memorial Bursary**
Program code: GEBO-659
Value: 1200
Awarded: Fall Spring Summer
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-694
Value: 250
Awarded: Fall Spring Summer
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 MBA Program.
Graduate Diploma in Business Administration Bursary  
Program code: GUBO-103  
Value: 250  
Awarded: Fall Spring Semester  
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 semester 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.

Management of Technology Master of Business Administration Bursary  
Program code: GUBO-102  
Value: 250  
Awarded: Fall Spring Semester  
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 semester 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 Spring Semester  
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 semester 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 semester based on demonstrated financial need and satisfactory academic performance.

University Women's Club of Vancouver/Jean Beatty 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 Spring Semester  
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 semester to students in good academic standing who have special circumstances requiring support not available from a sponsoring organization, current income or assets.

Hildegard and Cornelius Renner Graduate Bursary in Education  
Program code: gebo-517  
Value: 800  
Awarded: Fall Spring Semester  
Terms of reference: Awarded annually in any semester 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 Science Students  
Curzon-Digman Bursary  
Program code: GEBO-594  
Value: 750  
Awarded: Fall Spring Semester  
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 subjected 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-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 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: GEBO-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 provide evidence of eligibility. The Endowment has been established by the Association.

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.

Vancouver Horticulture Society Bursary  
Program code: GEBO-590  
Value: 750  
Awarded: Fall Spring  
Terms of reference: This award is available to students of the Master of Pest Management program studying pest problems relating to horticulture. It is awarded to students who are in financial need and qualified in terms of character and scholarship.

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 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 in the semester 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 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 semester indicated on the notice.

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. Apply to Financial Assistance approximately six weeks prior to the start of the semester. Application forms are available at Financial Assistance in MBC 3200 and on our website http://students.sfu.ca/fa.

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 Assistance
The purpose of the Canada Student Loan/BC Student Assistance 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 Assistance.

In August 2004, the BC government established a new loan reduction program to help high-need students manage the costs of post-secondary education. The B.C. Loan Reduction Program will be delivered in cooperation with the Canada Millennium Scholarship Foundation’s (CMSF) Bursary Program. The CMSF and the Province of British Columbia have agreed that CMS bursaries 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 eligibility criteria and details on the program please see the Ministry of Advanced Education website at bcsap.bc.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 Assistance or www.bcsap.bc.ca.

Eligibility
Applicants must be Canadian citizens or permanent residents (landed immigrants) to be eligible. Assistance will be provided to eligible registered full time 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.

Loan Amounts
Enhancements to the Canada Student Loan Program (CSLP) for 2005/2006 will result in an increase in federal assistance levels. Weekly loan limits on the federal portion of a student’s loan will increase (from $165/week to $210/week). Single full time students will be eligible for a maximum of $5,440 in BCSAP each semester. The maximum for students with dependent children is $8,160. You can apply for BCSAP for either one semester or two semesters at once (e.g. fall only, spring only, fall and spring).

How to Apply
A student in need of a Canada Student Loan/BC Student Assistance must first apply on-line at www.bcsap.bc.ca. Alternately, paper application packages are available from any post-secondary institution or from Financial Assistance. The application must be completed carefully and accurately by the student, and where applicable, by the spouse or parent(s). If the student’s application is approved, the student will receive in the mail notification of award from the Student Services Branch in Victoria.

After receiving the notification of award from the Student Services Branch in Victoria, the Canada Student Loan document will be mailed to the student from the Student Services Branch and the student will then take the loan document to a designated Canada Post outlet for submission to the National Student Loan Service Centre in Victoria. If the student is also eligible for BC Student Assistance, the student will receive with their notice of assessment a B.C. Loan Agreement from the Student Services Branch in Victoria. The student will then take the loan agreement to a designated postal outlet for submission to the BC Student Loan Service Bureau for processing. Once the Service Bureau processes the loan agreement, the Student Services Branch in Victoria will request confirmation of student’s enrollment by the school and the funds for which the student is eligible will be electronically disbursed to the student’s personal bank account according to financial information provided on the B.C. Loan Agreement. Students are advised to keep in constant touch with the bank, or service providers from which they secure their loans.

Interest on the loan is paid by the federal or provincial government as long as the student is registered as a full time student and the appropriate agencies are aware of their full time status. Students should contact their lending institution (bank, credit union, service provider) for information regarding the current interest rate and repayment schedule for Student Loans. Students who have previously received Canada Student Loans or BC Student Loans, but who do not negotiate one for their immediate period of study, should submit a Schedule 2 and/or Certificate 2 to their lending institution in order to retain payment free status. Students must be undertaking a minimum of nine regular credit hours (six for students with permanent disabilities) in the current semester, be a registered full time (part time for students with permanent disabilities) graduate student, or enrolled in a co-op education work term to be considered eligible for payment free status. These forms may be obtained from Financial Assistance or the lending institution.

For appeals, reassessments or other concerns, please contact Financial Assistance.

Exceptions
Although the majority of programs at Simon Fraser University are eligible for government student loans, some programs do not meet BC Student Assistance Program criteria (e.g. Executive MBA, full-time Off-campus). Please contact Financial Assistance if you do not see your program listed on the BCSAP 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).

Government Part-time Grants/Loans
If you are a part time student with demonstrated financial need, you may qualify for a federal study grant 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.bcsap.bc.ca. The deadline for applications is nine weeks before the end of each semester.

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 604.291.3112.

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. This grant replaces the Canada Study Grant for High Need Students with Permanent Disabilities (CSG-HNPD). 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 Assistance in MBC 3200 or call 604.291.4356 for further information.

Grants for Female Doctoral Students
A federal grant program is available to female doctoral students in specific doctoral programs. Please call 604.291.4356 for further information, or see www.bcsap.bc.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, Student Services Branch, Ministry of Advanced Education or visit the Student Services Branch website at www.bcsap.bc.ca (debt management tools).

Ministry of Advanced Education
Mailing address: PO Box 9173 Sn Prov Govt, Victoria, BC, V8W 9H7.

In Victoria call 250.387.6100; in the Lower Mainland call 604.660.2610; in North America call toll-free 1.800.561.1818, TTY 250.952.6832, Fax 250.356.9455 or toll-free fax in North America 1.888.262.2112, www.avedu.gov.bc.ca/studentservices/

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 Assistance, MBC 3200. On-line applications are available for most provinces. Check the Financial Assistance website at http://students.sfu.ca/fa 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. If you do not receive the original eight page SAR, you will need to contact FAFSA to request one.

To apply for Stafford Loans, the student must submit the signed SAR to Financial Assistance, 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.com.

Financial Assistance 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. 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 Assistance (Office of the Registrar) come to MBC 3200 or call 604.291.4356. You may also e-mail us at fiassist@sfu.ca
Graduate Studies

Individual Special Arrangements

(See “1.3.5 Admission Under Special Arrangements” on page 238.)

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 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 the supervisory committee.

SAR 896-6 Special Topics
To be selected by the student and the 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 238.)

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.

Certificate Programs

(See “1.3.13 Certificate Programs” on page 239.)

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 semesters 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.
Faculty of Applied Sciences


New address effective November 2006
8000 level Technology and Science Complex II
Dean
B.S. Lewis BA (Hamilton), MA, PhD (Iowa)
Associate Deans
W.S. Parkhouse BPE (Alta), MPE, PhD (Br Col)
J.D. Jones BSc (Sus), PhD (Reading), PEng
Director, Diversity and Recruitment
H. Matsui MSc (LSE)

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 of Resource Management
Master of Resource Management (Planning)
Master of Science
Doctor of Philosophy

General Regulations
For admission requirements, registration, residence requirements and time limit for completion of degrees, see “Graduate General Regulations” on page 237.

School of Communication
K9677 Shrum Science Centre, 604.291.3595 Tel, 604.291.4024 Fax, www.sfu.ca/communication
Director
M. Laba BA (York, Can), MA, PhD (Nfld)
Graduate Program Chair
(to be announced)

Faculty and Areas of Research
For a complete list of faculty, see “School of Communication” on page 108.

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
C. Bodnar – political economy of communication; theory and history; cultural industries
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; communications technology; 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 organizational communication
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
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
K. McAllister – cultural memory and historical perspective; colonial discourses and racial identity; photographic images, artifacts, archives, multi-media installations and 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, compositing, 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. Onufriuch – communication design for media; history and current principles, practices, theories and criticism; organizational communication; communication technologies, play, imagination and the human predicament
W.D. Richards – communication network theory and methods, dynamic system simulation methods; social and organizational network research
R.K. Smith – management of technological change
B.D. Tuax – acoustic and electroacoustic communication; audio aspects of media and advertising; electroacoustic and computer music
Y. Zhao – political economy of international communication; relationship between communication, development and democracy in transitional societies; media and information industries in China

Adjunct Faculty
S. Braham – telematics; networking computing; disaster management and emergency communications; telelearning; telehealth; teleworking
J.A.D. Holbrook – science policy, science and technology, innovation analysis
R.W. Howard – communication in development; communication in conflict; documentary video production
M. Lipsett – management of research and development in computer optics and aerospace industries

Adjunct Faculty
S. Braham – 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
S.G. Sigurdson – dialogue, negotiation, labor law, environment

Communication is a comparatively new discipline that builds on traditional social science disciplines. It focuses on analysis of the context and frames 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, advertising, 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 are given opportunities to 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

Simon Fraser University 2006 • 2007 Calendar
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

MA Program
Admission Requirements
Admission requires at least 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 semester.

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 semesters 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 semester. Although the graduate studies committee (GSC) will endeavor to provide interim advisors 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 requires completion of two essays of not more than 40 pages, which may be on related fields, but which may not substantially 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, on-line software development, or other technologically based formats.

All thesis and essay options will be bound and deposited in the University library. Procedures for the supervision and examination of extended essays and projects are the same as those for theses:

All master’s students present, discuss and defend their MA thesis, project and essay options in an exam before their supervisory committee and external examiner as required by graduate regulation 1.9.

Extensive guidelines for each option are found on the School of Communication’s graduate website: www.sfu.ca/communication/grad-prog/index.html

Supervision: a supervisory committee should be approved by the graduate studies committee at the beginning of the third semester.

Formal review: graduate degree candidates will have an annual formal review of their academic progress by the graduate studies committee.

Graduate courses are organized into six groups:
Group 1 contains survey courses that define and map the field in addition to exposing students to faculty interests and research programs.
Group 2 contains courses in research methods and methodology that help students with research projects in the field.
Group 3 contains courses in research areas that are available in the school. In Group 4 courses students to do field work or work and study in a professional setting. In Group 5 courses students carry out research and/or reading under the direct supervision of a faculty member. Group 6 refers to the course designations for work on theses, projects, extended essays, or dissertations in process, for colloquia where students present such work, and for comprehensive examinations.

Course Requirements
At least four graduate courses (normally completed before beginning a thesis, a project, or two extended essays) which must include the following, unless otherwise stipulated as a condition for admission:

• one course 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, 855, 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 semesters 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.

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 237. 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 semester. 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 level courses for those entering with a bachelor’s degree (including CMNS 860) or five graduate courses for those who have completed 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
• a minimum of two additional five credit courses for students entering with a master’s degree, at least one of which is to be selected from within the school and may include other courses from groups 1 and 2.

A minimum of five additional courses will be required of PhD program students who have not first obtained a master’s degree. CMNS 860, the graduate colloquium, is required for students
entering with a bachelor’s degree and may be included as one of the six required courses. A minimum of four of these courses must be taken from course offerings within the school. For all students, a maximum of two courses may be taken from groups 4 and 5. No more than two of group 4 or 5 courses may be taken with the same instructor, except with graduate studies committee permission. - students will be required by the communication graduate studies committee to demonstrate adequate command of any language essential to the completion of their dissertations

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, 855, 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, Theses and Comprehensives CMNS 860, 895, 899

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 semester. Upon passing, the student will be admitted to full degree candidacy. The examination may be retaken once.

To prepare for the comprehensive exam, students are required to select and design two comprehensive fields. Fields 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 breath requirement.

The students shall submit definition papers, including bibliography, on each of the fields in preparation for both a written and oral examination.

Dissertation Proposal Students will register in CMNS 899 in the semester immediately following completion of the comprehensives and 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 his or her supervisory committee by the beginning of the student’s third semester. 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.


Director U. Glaßser BSc, MSc, PhD, Habilitation (Paderborn) Graduate Program Director F. Popovich 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 111 and www.cs.sfu.ca


Associate Members For areas of research, refer to the department listed.

J. Borwein, Mathematics P. Borwein, Mathematics
### Research Facilities

The school operates several interconnected local area networks in co-operation with other Faculty of Applied Sciences departments. These networks are connected to Simon Fraser University LAN, the campus-wide network, which also provides 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 in computing science. It provides graduate studies in the following areas: 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 237) 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 semesters 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>
<thead>
<tr>
<th>Area</th>
<th>Formal Topics in Computer Systems</th>
<th>Area II – Computing Systems</th>
<th>Area III – Knowledge and Information Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>algorithms and complexity</td>
<td>operating systems and networks</td>
<td>artificial intelligence and robotics</td>
</tr>
<tr>
<td></td>
<td>formal logic and language semantics</td>
<td>computer design and organization</td>
<td>database and information retrieval systems</td>
</tr>
<tr>
<td></td>
<td>discrete mathematics</td>
<td>programming languages and compilers</td>
<td>numerical and symbolic computing</td>
</tr>
<tr>
<td></td>
<td>operations research</td>
<td>software methodology and engineering</td>
<td>computer graphics and interfaces</td>
</tr>
</tbody>
</table>

### Course Requirements

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 a 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 semester in the program, and that the remainder of the supervisory committee be chosen normally in the same semester 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 semesters and should not require longer than eight semesters. An MSc student must choose between thesis and project options by the end of the second semester. Any change in option thereafter must be approved by the graduate program committee.

#### Breadth Requirement

The MSc program requires a total of 30 credit hours of graduate work (five courses and a thesis which is equivalent to 15 credit hours of work.) Four of the five courses must be taken in computing science. At least one course must be chosen from each of the major Areas I, II and III from Table 1, and two courses must be at the 700 level.

Project MSc students must complete 30 credit hours of graduate work (eight graduate courses, and a project which is equivalent to six credit hours of work). At least six of the eight courses must be taken in the School of Computing Science. The courses must include at least one 700 level course in each of the Area I, II and III from Table 1.

Any 700 level course used to satisfy the MSc breadth requirement might be waived and replaced by an 800 level 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.

Any courses taken outside the School of Computing Science must be approved by the student's senior supervisor and the graduate breadth committee.

#### Depth Requirement

Thesis MSc students are required to demonstrate depth of knowledge in their research area through a thesis seminar and defense based on their independent work. Students should consult with members of their supervisory committee, and formulate and submit a thesis proposal for approval. This should not be done any later than the third semester.

Project MSc students must choose an area of specialization and submit a project report. Project topics may include a comprehensive survey of the literature of some computing science related research areas; implementation and evaluation of existing techniques/algorithms; development of interesting software/hardware applications.

Regulations specifying the examining committee's composition and procedures for the final thesis or project exam appear in the Graduate General Regulations.

#### PhD Program

Students in the PhD program are required to demonstrate breadth of knowledge as outlined below and demonstrate the capacity to conduct original research through the completion and defence of an original thesis. Under normal circumstances a PhD degree should be completed within 12 semesters and should not require longer than 15 semesters.

#### Breadth Requirement

PhD students are required to demonstrate breadth to a level equivalent to at least 24 credit hours of graduate level courses (typically eight courses), beyond those for 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 three 700 level courses, such that one course is drawn from each of the Areas I, II and III of Table 1

A 700 level course used to satisfy the PHD breadth requirements might be waived and replaced by an 800 level 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 CGPA of 3.4 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
broaden 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 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 semester 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 examination 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 defends the originality and feasibility of the proposed thesis to the supervisory committee. The thesis proposal is normally presented and defended within three semesters 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 about 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, MSEEE, 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 116.

I.V. Bajic – signal processing, information theory and their applications in image and video compression, multimedia communications and networking, and computational biology

M. Beg – computational anatomy, tools for segmentation and shape analysis in medical images, high-performance computation methods in medical imaging

J.S. Bird – statistical signal processing, system performance analysis, underwater acoustics and optics, radar, sonar and communications applications

C.R. Bogliossi – fabrication and characterization of advanced compound semiconductor devices such as high electron mobility and heterojunction bipolar transistors, development of new materials and processes for high speed devices, optoelectronics, heterostructure fabrication and characterization; solid state phenomena

T.W. Calvetti – information processing in man and machines, biomedical applications, graphics

J.K. Cavens – mobile communications, signal processing, network protocols

G.H. Chapman – microelectronics (fabrication, defect avoidance techniques, device physics), laser processing of materials, VLSI/water scale integration, computer aided design

V. Cuperman – signal processing, speech coding and recognition, multimedia information compression, digital communications, digital signal processing structures and hardware

J.C. Dill – computer graphics, computer aided design, user interfaces, intelligent design

D.A. Georghiou – adaptive signal processing for communications and remote sensing systems

B.L. Gray – microfluidics, interconnect and microassembly, biomedical microdevices and instruments, high-aspect-ratio microfabrication techniques

W.A. Gruber – intelligent robots, machine sensing and sensor-based control with applications to service robots, rehabilitation engineering, and manufacturing automation

K.K. Gupta – computer vision, robotics, interpretation of three dimensional scenes, motion planning, spatial reasoning

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 – multimedia communications, modulation and detection techniques, joint source and channel coding techniques, integration of stream and packet mode CDMA traffic

R.F. Hobson – very large scale integrated design, computer design

J.D. Jones – applications of artificial intelligence to engineering design, design for manufacturing, finite element analysis, heat transfer and thermodynamics

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

K. Karim – microelectronic circuit, device and process development for medical imaging applications and large area electronics; medical imaging using crystalline silicon CMOS technology, large area diagnostic X-ray imaging, X-ray detectors, and active pixel sensor for crystalline and amorphous silicon technology

D.J. Kim – spread-spectrum systems, cellular mobile communications, indoor wireless communications, wireless multimedia networks

J.B. Kuo – compact modeling of CMOS, bipolar, and power semiconductor devices, and low-voltage digital circuit design

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

M. Parameswaran – silicon micromachining, integrated microelectronics and micromechanical sensors and actuators, commercial integrated circuit process compatible sensors and actuators design, integrated circuit design, (application of micromachining for biomedicine and biotechnology) microelectronic processing, process and device simulation

S. Payande – robot mechanics and control modelling and control of grasping and manipulation, interpretation of contact forces and tactile images, kinematic geometry of mechanisms

A.H. Rawicz – biomedical transducers (sensors and actuators), optical engineering and biophotonics, vision sensors, reliability of biomedical devices

S.N. Robinovitch – dynamics and control of human movement, postural stability and balance, osteoporosis and hip fracture prevention, orthopedic biomechanics, rehabilitation engineering

M. Saif – 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. Syrzycki – microelectronics, semiconductor devices, digital and analog VLSI design, integrated circuit technology, integrated sensors, integrated circuit fabrication defects, yield and reliability of VLSI integrated circuits

L. Trajkovic – communication networks (performance analysis, simulation of protocols and scheduling algorithms, traffic collection, characterization, and modeling), wireless and mobile 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 for the MEng program 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 accepted into the programs.
Transfer from MEng Program to MASc Program

Normally transfer from MEng program to 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 are required to complete a minimum of 21 graduate level credit hours. All students must take ENSC 820, specialize in an area of study, and take the required course or courses(s) as follows. Students specializing in communications must take ENSC 805 and 810, electronics specialization must take one of ENSC 851, 852 or 853 and intelligent systems or control theory specialists must take ENSc 801. Elective courses from the list below normally make up the remainder of the 21 required hours. Additional courses may be required to correct deficiencies in the backgrounds.

In addition to course work, a student must complete a project, expected to take a minimum of two person months. In the event that the project is performed in the student’s work place, 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 the project completion, the student makes an oral presentation to the supervisory committee and the graduate chair. A grade will be assigned based on the quality of the report, 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 registered in the MEng program 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 245.

Degree Requirements – MASc Program

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 course requirement of the MASc degree. At least six hours of course work must be ENSC graduate courses. 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 student defends the thesis at an examination, 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 semesters, in the case of a MASc student, or four semesters, in the case of a PhD student.

Failure to Comply

See “1.8 Progress, Withdrawal and Leave” on page 241 in the Graduate General Regulations section.

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 237 for other PhD program admission requirements.

Residence Requirement

Students will conform to the residence requirement (see ‘1.7 Residence and Course Requirements’ on page 240).

Transfer from the Master’s Program to the PhD Program

Proceeding to a PhD program without completing a master’s degree is discouraged. However, a student may be admitted after at least 12 months in the MASc program if all requirements have been completed with a 3.67 or better CGPA, outstanding potential for research has been shown, and approval of the student’s supervisory committee, graduate program committee and senate graduate studies committee been given.

Degree Requirements

Course Work

The minimum requirement is 18 credit hours beyond that of the MASc degree. Six of these hours will be for prescribed courses in the option in which the student is enrolled; alternatives can be substituted with the approval of the student’s supervisory committee. At most, six hours may be senior level undergraduate courses. At most, six credit hours may be directed studies. At least, six credit hours must be within engineering science, except that ENSC 820-3 may not be used towards the course requirement of the PhD degree. Additionally, students may be required to correct deficiencies in the student’s background.

Qualifying Examination

To qualify the student will submit a brief written research proposal and defend it orally to his/her supervisory committee within the first 14 months of admission. The proposal defence will be judged according to the feasibility and scientific merits of the proposed research, and demonstration of a sophisticated understanding of general material in the student’s major area of research. This level of understanding is associated with senior undergraduate and first year graduate course material. The possible outcomes of the qualifying examination are ‘pass’, ‘marginal’ and ‘fail’ (a student with ‘marginal’ will be required to re-submit the research proposal and defend it for the second and final time within six months and/or to take more courses; a ‘failing’ grade requires withdrawal).

Thesis

Students define and undertake original research, the results of which are reported in a thesis. An examining committee is formed as defined in “1.9.3 Examining Committee for Doctoral Thesis” on page 242. Students conform to residence requirements as defined in “1.7.3 Residence Requirement for the Doctoral Degree” on page 241.

The senior supervisor will be an engineering science faculty member approved by the school’s 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 241.

Research Seminar

PhD students present at least one research seminar per year as part of regularly organized departmental seminars, including some based on completed or nearly completed thesis work. Students are expected to attend all the research seminars of the school.

Directed Studies and Special Topics Courses

Directed studies (ENSC 891, 892) and special topics (ENSC 894, 895) courses may be offered by the following research groups, subject to student interest and demand.

Communications Group

estimation theory
ATM network performance evaluation
optical telecommunications networks
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

Microelectronics 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
photonic 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.

PHYS 852-3 VLSI Systems Design
CMPT 853-3 Computer-Aided Design/Design Automation for Digital Systems

School of Interactive Arts and Technology
Simon Fraser University Surrey, Central City, 250-13450 102nd Avenue, Surrey, BC V3T 0A3, 604.288.7500 Tel, 604.288.7488 Fax, www.siu.sfu.ca

Graduate Program Chair
R. Woodbury BArch (Car), MSc (Syr), PhD (Mich State)

Faculty and Areas of Research
For a complete list of faculty, see “School of Interactive Arts and Technology” on page 121.

J. Budz – collaborative product development; interface design and navigation; interactive products; visualization: virtual and physical; digital literacy; electronic conferencing
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 avatar and agent collaboration systems
M.V. Engel – telematic architectures for creative collaboration, computer game worlds, multi-user virtual environments, digital storytelling, information visualization and navigation
M.K. Hatala – knowledge representation and knowledge management; ontologies and semantic web; intelligent information retrieval; organizational learning; online learning
D. 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
S. Kozel – live performance in mediated environments; philosophies of embodiment; motion capture and motion tracking systems; artificial life: discourses and practices; wearable design and performance; interactive technology
K. Newby – encoding practice; reflective practice; visual strategies, which critically evaluates research and design; collaborative authorship; digital culture and online learning
K. Mitchell – knowledge representation and management; design space exploration, parametric design, advanced manufacturing and visualization knowledge; virtual and physical; digital literacy; and choreography of human figures; networked multimedia systems for learning; the design and evaluation of human-computer interfaces for complex systems; computer graphics
R. Woodbury – design space exploration, parametric design, design 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
M.K. Hatala – knowledge representation and knowledge management; ontologies and semantic web; intelligent information retrieval; organizational learning; online learning
D. 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
S. Kozel – live performance in mediated environments; philosophies of embodiment; motion capture and motion tracking systems; artificial life: discourses and practices; wearable design and performance; interactive technology
K. Newby – encoding practice; reflective practice; visual strategies, which critically evaluates research and design; collaborative authorship; digital culture and online learning
K. Mitchell – knowledge representation and management; design space exploration, parametric design, advanced manufacturing and visualization knowledge; virtual and physical; digital literacy; and choreography of human figures; networked multimedia systems for learning; the design and evaluation of human-computer interfaces for complex systems; computer graphics
R. Woodbury – design space exploration, parametric design, design 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

Program Goals
The program has two goals. The first is to explore, understand and critically evaluate the interplay between technology and society in the broadest terms, and in particular, between technology and our social and cultural environments. The second is to foster the development and design of new technologies to benefit us in existing contexts and to elaborate, expand and create contexts for beneficial technological application.

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 in technology in its contexts, particularly the computation that drives much current technological development; second, inquiry into and use of research methodologies that enable interdisciplinary collaboration and the development of new technologies; third, research into the acts of designing, making, managing and learning about technology; and fourth, demonstration of new technologies in their contexts.

A hallmark of the program is its emphasis on interdisciplinarity, 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 philosophies and techniques for collaboration among disciplinary experts. Students learn in an environment that employs traditional course work, one-on-one mentoring, teamwork, and technology-enhanced learning. In short, students are immersed in an environment that is both technology rich and structured for interdisciplinary co-operation.

Degrees Offered
The program offers courses of study leading to the MA, MSc and Ph.D. It provides graduate study in diverse areas related to people, technology and society, especially the areas of art, design, games and knowledge management.

The following degrees have been phased out. They are available to students admitted in September 2003 or earlier.

· Master of Applied Science (Information Technology)
· Master of Applied Science (Interactive Arts)

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 fame design; digital storytelling; human figure, face and character animation; information visualization; interaction design; interactive narrative; knowledge representation; management and visualization knowledge visualization; media and telecommunication policy; performance in mediated environments; scientific visualization; visual analytics; and ubiquitous computing and wearable computing.

Faculty research is supported by NSERC, SSHRC, the Networks of Centres of Excellence, Canarie, Heritage Canada, the Canadian Foundation for Innovation, the BC Knowledge Development Fund, BCcampus and others.

Research Laboratories
The school operates an extensive suite of research laboratories in new facilities. It dedicates the best spaces in these facilities as working space for graduate students. The facilities include the following.

The Usability Lab
This lab supports research in user interfaces, user response, internet structure, online repositories and visualization. Facilities include head and eye tracking equipment, servers, terabyte storage arrays, software, displays, and desktop and laptop computers.

The Black Box
This lab provides the ability to stage and measure human motion and performance. It includes a theatrette with resilient floors, blackout curtains, lighting, sound, motion capture and blue screen. Ancillary equipment includes cameras, software, servers and desktop computers.

Rapid Prototyping Lab
This new lab is supporting a suite of tools and fixtures for rapid creation of design prototypes. It includes a 3D printer, an industrial sewing machine, large format
Regulations

• an undergraduate degree in a field related to the
Requirements for MA and MSc Programs
University, as described in the
minimum standards will be those of Simon Fraser
special cases.
There will be annual admission into the program with
possibility of early or out-of-cycle admissions in
Ties with high technology industry and other Simon
Regional Opportunities
significant on-site specialized research collection.
existence, the former TechBC developed a small but
numerous helpful Internet guides support research
in the audience reception of media. It houses a
high-resolution projector, a 102” screen, multimedia
recording and playback systems and a 3000W stereo
sound system.
Simon Fraser University Libraries
Specialized reference services and specialist
librarians for the graduate program are available.
Numerous helpful Internet guides support research
and thesis preparation. The University’s library
system has collections relevant to computer science,
engineering science, contemporary arts, business,
education, mathematics and the arts. During its brief
existence, the former TechBC developed a small but
significant on-site specialized research collection.
Regional Opportunities
Ties with high technology industry and other Simon Fraser University programs offer additional facilities
and synergies for graduate level research.

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 237), 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 in
Computer Science, BArts Engineering (Electrical,
Communications, Computer
Engineering) BA or BSc in Education, Management
Economics or Communications, BFA in Art, Design
or Performing Arts, BA in Art, Art History,
Architecture, Linguistics, Psychology or Philosophy.

Regional Opportunities
Ties with high technology industry and other Simon Fraser University programs offer additional facilities
and synergies for graduate level research.

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 237), 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 in
Computer Science, BArts Engineering (Electrical,
Communications, Computer

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 being considered for admission
may be required to submit a portfolio of their work
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:
advise 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. The normal size of a PhD
supervisory committee is two or three.

MA Program

Degree Requirements
Students fulfill the following requirements to complete
their 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 it 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

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 will be listed on the program’s website (www.siat.sfu.ca/grad) as they become available.

MA students are required to complete two courses from the pool of electives, special topics and directed readings. Subject to supervisory committee approval and graduate program committee approval, students in the program may fulfill part of these requirements through other appropriate graduate courses at Simon Fraser University or elsewhere (the latter subject to Simon Fraser University rules on external courses).

Normally, all students must take at least one course towards the requirements as either an elective or special topics offered within the program. For determining degree requirements in core, elective, special topics and directed readings categories the number of courses of at least three credits each shall be used. At least one elective is required to be a research methods course appropriate to the student’s course of study.

Special topics courses offered in 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, each special topics course will be evaluated for suitability for fulfilling the program’s research methods requirement 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 comparable course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the MA Thesis. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally an MA student would take at most one directed readings course 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 888-3 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 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 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. MA students are required to present in one seminar and 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, MA 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 MA 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 arrangements external to the program. Students participating in co-operative education will be eligible for the co-op registration 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
MA 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 MA 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
Students who are working on their Master of Arts thesis register in this course. This course will not count towards the course work requirements.

MSc Program
Degree Requirements
Students fulfil 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 four additional courses as described below.

Core Courses
MA students must complete two courses from IAT 801-3 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 will be listed on the program’s website (www.siat.sfu.ca/grad) as they become available.

MSc students are required to complete two courses from the pool of electives, special topics and directed readings. Subject to supervisory committee approval and graduate program committee approval, students in the program may fulfill part of these requirements through other appropriate graduate courses at Simon Fraser University or elsewhere (the latter subject to Simon Fraser University rules on external courses).

Normally, all students must take at least one course towards these requirements as either an elective or special topics offered within the program. For determining degree requirements in core, elective, special topics and directed readings categories the number of courses of at least three credits each shall be used. At least one elective is required to be a research methods course appropriate to the student’s course of study.

Special topics courses offered in 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, each special topics course will be evaluated for suitability for fulfilling the program’s research methods requirement 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 substantively comparable course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the MA Thesis. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally an MA student would take at most one directed readings course 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 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 substantively comparable course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the MSc Thesis. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally an MSc student would take at most one directed readings course 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 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 substantively comparable course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the MSc Thesis. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally an MSc student would take at most one directed readings course 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 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 substantively comparable course offered at Simon Fraser University. Directed readings should be distinct from the work to be undertaken towards the MSc Thesis. Normally, directed readings should not be taken under the supervision of a student’s senior supervisor. Normally an MSc student would take at most one directed readings course 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 and the results of such evaluation will be noted in the course approval and course outline.
IAT 844-3 Spatial Computing
IAT 845-3 Methods for Research into Technological Systems
A special topics course approved by the graduate program committee for study towards the MSc degree.

A directed readings course approved by the graduate program committee for study towards the MSc degree.

The following courses may also be used to satisfy elective requirements subject to the MSc elective requirement above.

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 845-3 Methods for Research into Technological Systems

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 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 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. MSc students are required to present in one seminar and 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, MSc 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 MSc students to gain practical research experience in settings external to the program. Enrollment 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 arrangements external to the program. Students participating in co-operative education will be eligible for the co-op registration 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
MSc 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 MSc 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 898-6 MSc Thesis
Students who are working on their Master’s thesis register in this course. This course will not count towards the course work requirements.

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 compliment 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 will be listed on the program’s website (www.siat.sfu.ca/grad) as they become available.

PhD students are required to complete at least two courses from the pool of electives, special topics and directed readings. Subject to supervisory committee approval and graduate program committee approval, students in the program may fulfill part of these requirements through other appropriate graduate courses at Simon Fraser University or elsewhere (the latter subject to Simon Fraser University rules on external courses). Normally, all students must take at least one course towards these requirements as either an elective or special topics offered within the program. For determining degree requirements in core, elective, special topics and directed readings categories the number of courses of at least three credits each shall be used. At least one elective is required to be a research methods course appropriate to the student’s course of study.

Special topics courses offered in 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, each special topics course will be evaluated for suitability for fulfilling the program’s research methods requirement 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 comparable 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, 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 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 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,
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 for 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 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.

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.
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 registered in their third through sixth semesters 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:

- Evidence that the student is capable of completing the MSc course work in one calendar year of full-time study. However, it is anticipated that normally six semesters will be required for the completion of this degree. The program can be undertaken by students who are also employed.

**Application Criteria for Transfer from MSc to PhD Program**

Students must show competence in academic performance (e.g. minimum GPA of 3.67)

- Strong support letters from the senior supervisor and at least one other academic referee
- Excellent academic performance
- Strong background in research design and statistics or modelling 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**

Graduate 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 meet the student’s and the school’s requirements. 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. A student may be directed to acquire an adequate knowledge of a language which would be relevant to his/her studies.

The student will present two seminars plus a dissertation proposal on topics approved by the student’s supervisory committee. They will be presented during the regularly scheduled school seminar time, normally between the first and sixth semesters. Both the timing and subject matter of seminars will be chosen by the supervisory committee in consultation with the student.

**Comprehensive Examinations**

At a time set by the supervisory committee, and within six semesters of residence, the student takes written and oral comprehensive examinations. The comprehensive examination committee consists of a minimum of five people, at least three of whom must be School of Kinesiology faculty members, including the senior supervisor and the graduate program chair (or designate, who will act as the committee chair), plus one faculty member from outside the school.

Written

There will be four written examinations.

**Part One**

One examination paper will be devoted to the student’s field of specialization and will permit extensive exploration of the research area. This examination is typically set by the senior supervisor in consultation with the comprehensive examination committee and consists of the following four parts:

- An initial response, based on a four to six hour single sitting, closed book exam.
- A further three days during which the student will prepare and submit a response to the same question.

**Part Two**

The other three examinations are based on three supplementary and related areas chosen by the comprehensive examination committee after consultation with the student. Decision of the examining committee is by simple majority.

Possible results of each written exam are pass, defer or fail. A deferral is used when the examiner wishes to defer judgment until after the oral examination. A student who fails one examination must rewrite that component. A complete rewrite of all four examinations at a subsequent sitting is required in the case of either failure of more than one or passing less than two of the written comprehensive examinations. An unsatisfactory performance on the second trial necessitates withdrawal from the program.

**Oral**

Students proceed to the oral examination when a pass or deferred (maximum of two grades) on all four sections of the written exam is received. The oral exam is held by the comprehensive exam committee. The student will be examined primarily in the areas covered by the written examination, but questions may range over the entire discipline. Possible results of the oral exam are pass, defer or fail. A student who fails the oral exam may take it again only once. A deferral results in specific conditions of remedial work or re-testing as determined by the examining committee. A deferred evaluation will not be converted to a pass unless the committee’s conditions have been met within the established time frame. Otherwise, the deferral will lapse to a fail. The student cannot proceed to the dissertation proposal until the oral comprehensive exam has been passed.

**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.

For information and regulations, refer to the "Graduate General Regulations" on page 237.

**School of Resource and Environmental Management**

8405 Technology and Science Complex I,
604.291.4669 Tel, 604.291.4968 Fax,
www.rem.sfu.ca

**Director**

W.K. de la Mare BAS (Caufield Tech), PhD (York, UK)

**Professors Emeriti**

J.C. Day BS, MSc (Wont), PhD (Chic)

J.L. Knettsch BS, MS (Mich State), MPA, PhD (Harv)

**Professors**

W.K. de la Mare BAS (Caufield Tech), PhD (York, UK) — models for assessment, forecasting and ecosystem-based management and conservation of marine systems

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

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. Haidar MSc (Vienna), MA (Car), PhD (McG) — parks and outdoor recreation, human dimensions in resource management, choice modelling, social decision support systems

K. Lertzman BSc (Manit), MSc, PhD (Br Col) — forest ecology, long term forest dynamics, landscape ecology, conservation biology, global change

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

D. Knowler BA, MA (Alta) PhD (York, UK) — ecological economics, bioeconomic modelling, natural resource management in developing countries, valuation of environmental resources

K. Rothley BS (MIT), MBA, ME (Cornell), PhD (Yale) — conservation biology, behavioral ecology, design of protected areas

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 Association, 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. Bunnett BSF (Br Col), PhD (Calif) – professor, Faculty of Forestry, University of British Columbia

A. Fall BSc, PhD (S Fraser) – research consultant working on landscape ecology, spatially explicit simulation, natural disturbance models and sustainable forest management

J. Fall BSc (Vic, BC), MRM (S Fraser), instructor, Capilano College

D. Fast BA (Sask), MSc (York, Can), regional director general, Environment Canada

M.J. Fortin BSc, MSc (Montr), PhD (NY State) – associate professor, 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 (Calg), MSc (Vic, BC) – Director of Northern Affairs, Polar Gas, Calgary (environmental impact assessment)

L. Hunt BA, BA, MA (Wat), PhD geography and environmental studies candidate (Wat)

M. Ikonomou BSc (Trent), MSc, PhD (Alta) – research scientist, Department of Fisheries and Oceans (mass spectrometry, environmental analytical chemistry and environmental pollution as it relates to fresh water and marine ecosystems)

P. Kariya BA (Br Col), MA, PhD (Clark) – Executive Director, Pacific Salmon Foundation

M. Kent BA (S Fraser), MSc (Alta) – Director, Highway Environment, BC Ministry of Transportation and Highways

N. Knight BSc, MRM (S Fraser), PhD Phil Community and Reg Planning (Br Col)

W. Kurz DipHolzért (Hamburg), PhD (Br Col) – forest ecology and management, global carbon budgets

P. Lee BSc (S Fraser), MSc (Prin), PhD (S Fraser), monitoring ecologist, Parks Canada, Vancouver (ecological integrity)

J.S. Macdonald BSc (S Fraser), PhD (WOn) – fisheries scientist, Department of Fisheries and Oceans (ecosystems processes in watersheds, trophic ecology 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)

D. Marmorek BES (Wat), MSc (Br Col) – Director and partner, Environmental and Social Systems Analysts Ltd. (ESSA), Vancouver BC (adaptive environmental assessment and management; ecological impacts of acid deposition)

D.W. 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 Environment End-Use Data and Analysis Centre (CIEEDAC) and Energy Research Group (ERG) (energy system modelling, industrial energy use analysis, energy efficiency analysis, technology assessment)

D. O’Gorman BA (Alta), MA (Br Col) – Deputy Commissioner, Commissioner on Resources and Environment, Victoria

M. Pellatt 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

S.G. Sigurdson BA (Manit), QC – Principal, The CSE Group (development of regulatory frameworks and conflict management systems; fisheries issues to environmental assessments; forest management to health care, resource, land use, and environmental matters, often involving First Nations)


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

P. Wright BS (Lakehead), MS, PhD (Ohio State) – (environmental conflict resolution, parks and outdoor recreation)

Associated Faculty

A.S. Harestad, Biological Sciences

M. Roseland, Geography

R. Routledge, Environmental Studies

M. Schmidt, Geography

“joint appointment with archaeology”

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, 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 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 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.

Admission Requirements

Refer to the “Graduate General Regulations” on page 237 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 15.

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. 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:

- application for graduate admission, 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.

Requirements

A mandatory non-credit one day orientation workshop for all new diploma program students will give an overview of 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 612-5 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

Students must also complete one or more of the following courses, or others approved by the academic program co-ordinator and instructor of the course:

REM 612-5 Simulation Modelling in Natural Resource Management
REM 625-5 Risk Assessment and Decision Analysis for Management of Natural Resources
STAT 602-3 Generalized Linear and Non-linear Modelling

Master's Program

Students who successfully complete this program will be awarded the degree of Master of Resource Management.

Students must complete seven required courses (see below), six graduate elective courses and a research project (REM 699). A minimum of 89 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 statistics.

Required Courses

Students must complete all of REM 601-5 The Social Science of Natural Resources Management

REM 611-5 Applied Population and Community Ecology
REM 621-5 Ecological Economics
REM 631-5 River Basin Analysis, Planning and Valuation Management
REM 698-3 Field Resource Management Workshop
REM 699-10 Research Project
REM 801-5 Principles of Research Methods and Design in Resource and Environmental Management

and one of REM 642-5 Regional Planning I REM 644-5 Public Policy Analysis and Administration

Elective Courses

To fulfill 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.

In Canada, this planning stream program is distinctive because of its focus on the policy, economic and science aspects of natural resource and environmental planning.

The program is accredited by the Canadian Institute of Planners (CIP) and the Planning Institute of BC (PIBC). An MSc (Planning) graduate is eligible for membership in these institutes as a certified professional planner and may enjoy improved employment prospects, conference and workshop participation, and access to professional development programs.

Students must successfully complete the following courses.

Required Courses

REM 601-5 The Social Science of Natural Resources Management
REM 602-5 Natural Resource Management II: Advanced Seminar
REM 611-5 Population and community Ecology
REM 621-5 Ecological Economics
REM 631-5 River Basin Analysis, Planning and Management
REM 641-5 Law and Resources
REM 642-5 Regional Planning I
REM 643-5 Environmental Conflict and Dispute Resolution
REM 699-10 Research Project
REM 801-5 Principles of Research Methods

Elective Courses

In addition to the specified required courses, students complete three elective courses chosen from the following:

REM 610-5 Applied Environmental Toxicology and Environmental Management of Contaminants
REM 612-5 Simulation Modelling in Natural Resource Management
REM 613-5 Methods in Fisheries Assessment
REM 625-5 Risk Assessment and Decision Analysis for Management of Natural Resources
REM 632-5 Terrain Evaluation
REM 633-5 Introduction to Remote Sensing and Aerial Photographic Interpretation
REM 644-5 Public Policy Analysis and Administration
REM 645-5 Resource Development Communities
REM 646-5 Environmental and Social Impact Assessment and Environmental Management Systems
REM 647-5 Parks and Outdoor Recreation Planning
REM 648-5 The Tourism System
REM 649-5 Tourism Planning and Policy
REM 650-5 Energy and Materials Management and Policy
REM 651-5 Project Evaluation and Non-market Valuation Management
REM 652-5 Community Tourism Planning and Development
REM 655-5 Water Planning and Management
REM 658-5 Energy and Materials Systems Modelling
REM 660-5 Special Topics in Natural Resources Management
REM 670-5 Introduction to Forestry
REM 671-5 Forest Ecology

plus any course from approved external curriculum such as Simon Fraser University's Centre for Sustainable Community Development, Simon Fraser University's The City Program, UBC's School of Community and Regional Planning, or other relevant Simon Fraser University courses such as geography, business, etc.

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 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 15 of the year of requested admission. See "1.3.4 Admission to a Doctoral Program" on page 238.

Transfer from the Master's Program to the PhD Program

An MIRM 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 semesters.

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.

Simon Fraser University 2006 • 2007 Calendar
**Graduate**

**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 698-3 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

All courses in the school can be taken for credit toward a PhD degree except REM 601 and directed studies courses.

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 integrative paper which addresses issues in these three areas. The integrative paper is evaluated by the comprehensive examination committee in accordance with the policies and procedures of the School of Resource and Environmental Management. Students must pass an oral exam based on the integrative paper which is administered by the comprehensive examining committee. The integrative paper will normally be completed in the first three terms in the PhD program and the oral exam will normally be completed early in the student's fourth term in the program. If the candidate fails the comprehensive exam, and this assessment is approved by the graduate studies committee, the student will be required to withdraw from the PhD program.

Detailed information about the comprehensive examination procedures, dates, and deadlines are provided in the PhD Handbook of the School of Resource and Environmental Management.

**Thesis Proposal**

PhD candidates must submit a written thesis proposal by the end of the fifth semester of full time program enrolment. In conjunction with the supervisory committee, students develop a detailed written research proposal which must be defended before this committee. This thesis proposal is intended to demonstrate that the candidate's research abilities are adequate for PhD level research and to determine that 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 registered and in residence at Simon Fraser University for the minimum number of semesters as described in the “Graduate General Regulations” on page 237.
Faculty of Arts and Social Sciences

6168 Academic Quadrangle, 604.291.4414 Tel, 604.291.3033 Fax, www.sfu.ca/arts

Dean
J.T. Pierce BA (Tor), MA (Wat), PhD (Lond)

Associate Deans
H. Dawkins BFA (Nova Scotia Art & Des), MA, PhD (Leeds)
A.M. Gill BA (Hull), MA (Alta), PhD (Manit)
M.A. Gillies BA (Alta), MPhil, DPhip (Oxf)
T.A. Perry BA (Wabash), MA, PhD (Indiana)

Assistant Dean
C. Godman BA, MA (W Ont)

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 237 for admission requirements, registration, 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.

Arrangements for the work semesters are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance. For further details, see “Co-operative Education” on page 231.

Department of Archaeology

9635 Education Building, 604.291.4727 Tel, 604.291.5666 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 131 for a complete list of faculty.

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
P.M. Hobler – Northwest Coast, Southwest, field techniques, historic components at Native sites
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
R. Shutter Jr. – paleoanthropology of East and Southeast Asia and Japan, prehistoric 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 ethology 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-science, archaeoastronomy, indigenous archaeology

Adjunct Faculty
R.A. Lazeny – biological and forensic anthropology
A.D. McMillan – archaeology and ethnology of China, Western Canada, North America, East Asia
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. Mathewes, 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, geoarchaeology, historical archaeology, lithic analysis, palaeoanthropology, paleoethnobotany, skeletal biology and zooarchaeology. The student gains a comprehensive understanding of the discipline and strives to acquire a general knowledge of world prehistory, physical anthropology, and archaeological theory and method, in addition to gaining knowledge and expertise in particular areas of research interest. Depending on enrollments, individual or group courses can be arranged in addition to regularly scheduled courses.

Degree Requirements
A distinction is made between program enrolment and formal advancement to degree candidacy. A candidate is a student who successfully completes advancement to candidacy requirements (defined below). Normally, advancement happens once the Simon Fraser University residency is fulfilled, but not later than the end of the sixth semester after PhD admission and not later than the end of the sixth semester for MA students.

MA Program
This program consists of these sequential steps: course requirements, thesis prospectus, colloquium presentation, advancement to candidacy, and thesis completion and defence. Students are expected to complete all MA program requirements in a maximum of nine semesters of full-time registration.

Course Requirements
Students complete a minimum of three graduate courses including ARCH 871 and 876, and a thesis. Students may be required by their committee to take additional courses and must take ARCH 872/873 each semester it is offered. ARCH 873 credit does not constitute part of the normal MA requirement. Grading for ARCH 872 and 873 will be satisfactory/unsatisfactory (S/U). Course requirements, thesis prospectus and colloquium presentation should be completed by full-time attendance students by the end of the second semester.

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.

The colloquium is not to be considered a defence of the prospectus, per se, but is a means whereby the student may benefit from the collective expertise of the department.

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 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 semesters of full-time registration.

PhD Program
This program consists of these sequential steps: course requirements, comprehensive exam, thesis

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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 also required to take ARCH 872/873 each semester 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 (SU).

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.

School for the Contemporary Arts
Room 610C SCA, 604.291.3724 Tel, 604.291.5907 Fax, www.sfu.ca/scac, mfagrad@sfu.ca

Interim Director
Q. Underhill BMus (Vic, BC), MA (NY State)

Graduate Program Chair
D.K. Maclntyre BMus, MMus (Vic, BC)

Faculty and Areas of Research
See "School for the Contemporary Arts" on page 137 for a complete list of faculty.

C.V.A. Browne – documentary and innovative film production, poetry, fiction, screenplay, poetics, 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
M. Diamond – acting, directing, dramaturgy, creative writing
A. Eigenleidt – music for dance, MIDI systems, digital signal processing
M. Eis – ballet, modern dance, body therapies, choreography, dance education, dance history
J. Garay – choreography, performance, costume design
M.S. Gottfrid – electroacoustic music, film-sound design and scoring
R. Groeneoeber – film direction, editing and script writing, film production
P. Gruben – directing, scriptwriting, editing; dramatic writing
G. Harris – lighting and scenic design, production management
B. Hegland – lighting design, stage design, theatre technology, theatre architecture
R. Kittos – 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 structuring, third world film, comedy, directing, women's studies
J.A. Macfarlane – lighting design for the stage, theatre technology
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. Oleksiuk – images and objects produced in Britain and Canada, intercultural and global approaches to the history of art, contemporary art and visual culture
C. Prophet – choreography and performance
J. Radul – performance, video, photography, sound and text, contemporary theatre
A. Smith – drumming, jazz, popular music and accompaniment, African music
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
O. 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 – video and video based installation, image and text, in the public realm, contemporary theory – feminist, post-colonial and diasporic discourses

*Joint appointment with communication
**Joint appointment with women's studies

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 context. 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 on the production of creative work in an interdisciplinary context. The program is full time and takes 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 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

plus two of
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

School of Criminology
2630 Diamond Building, 604.291.4762/2123 Tel, 604.291.4140 Fax, crimgrad@sfu.ca, www.sfu.ca/criminology

Director
R.M. Gordon BA (La Trobe), MA ($ Fraser), PhD (Br Col)

Graduate Program Director
N.T. Boyd BA (WOnt), LLB, LLM (Law Soc Upper Canada)

Faculty and Areas of Research
See "School of Criminology" on page 144 for a complete list of faculty.

G.S. Anderson – forensic, medical and veterinary entomology
E.O. Boyanowsky – community standards and the law, environment, emotion and behaviour, 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,

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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. Burch – penology, corrections, sociology of law, social control, reproduction and law, state theory, electronic monitoring of offenders
W. Chan – critical criminology, feminist jurisprudence, homicides between partners, representations of women and violence, technology and social theory
D.E. Chunn – feminist legal theory; crimes of authorities; family, law and social policy; historical sociology of crime, law and social welfare; media representations of women in law; ‘policing’ violence against women
R.R. Corrado – comparative juvenile justice, terrorism, evaluation research, administration of justice in Canada
G.J. Davies – statistical analysis, political terrorism, communism
E. Elliott – social philosophy of punishment and abolitionism, critical analysis of the prison, women in prison, fear of crime
J. Faubert – dangerousness and risk assessment, contemporary criminological theory, qualitative research methods, media and crime
W.G. Glackman – research methodology, multivariate statistical techniques, forensic psychology, perceptions of crime
R.M. Gordon – adult guardianship/protection law, abuse and neglect of the elderly, health law including mental health law, young offenders and youth justice, gangs and related groups, restorative justice
C.T. Grifths – corrections, Native American criminality, delinquency and involvement in the criminal justice system, delivery of criminal justice services in the North, cross cultural studies in juvenile justice
M.A. Jackson – criminal justice administration and planning, judicial attitudes and sentencing behaviour, corrections (including alternatives to incarceration), law enforcement management, psychiatric decision-making, elderly, native, and female offenders, restorative justice
B. Kinney – court sentencing patterns, data interoperability in criminal justice databases
D. Lacombe – sociology of law and deviance, gender relations, political sociology
J. Lowman – prostitution, prostitution law and law enforcement, sociology of punishment, critical theory, research ethics
P. Lussier – criminological theory, developmental life-course criminology, interpersonal violence, sexual offending, prediction and classification, risk assessment, quantitative research methods
D. MacAlister – criminal law, criminal procedure and evidence, civil liberties, sentencing theory, restorative justice, policing and police powers, criminal justice accountability, wrongful conviction, legal responses to terrorism, mental health law, jurisprudence
N.A. Madu – correctional counseling, ethical dimensions and issues for helping professionals, rights of persons with developmental disabilities, effective communication and wellness, Zen and the art of helping, application and process of therapeutic theory, multiple dimensions of human potential
R.J. Menzies – assessment of dangerousness, sociology of law, criminal criminology, psychiatry and law, dangerousness and violence, clinical and judicial decision-making, history of crime and mental health, research methods
J.A. Osborne – criminal law and procedure, human rights and civil liberties, administration of criminal justice, juvenile justice
T.S. Palys – research methodology, evaluation and assessment, decision-making, philosophy of science/sociology of knowledge
S.N. Verdun-Jones – criminal law, procedure and evidence, comparative criminal law and procedure, jurisprudence, sociology of law, interdisciplinary criminal justice research, history of criminal justice
Associate Members
For areas of research, refer to the department listed.
S. Duguid, Humanities
J. Whately, Continuing Studies
C. Yerbury, Continuing Studies

Degrees Offered
The school's graduate programs lead to MA and PhD degrees.

Areas of Study and Research
The graduate programs in criminology concentrate on advanced academic study and have a strong research emphasis. The broad goal of the program is to prepare students for careers in the teaching of criminology, in criminological research and in policy-making in criminal justice.

The emphasis of the graduate programs is to foster a spirit of inquiry and creative endeavour among the students, to develop their critical and analytical capabilities, and to train them in the various techniques of criminological research.

The 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 466.

Criminology Research Centre
See "Criminology Research Centre" on page 483.

Feminist Institute for Studies on Law and Society
See "Feminist Institute for Studies on Law and Society" on page 464.

Institute for Studies in Criminal Justice Policy
See "Institute for Studies in Criminal Justice Policy" on page 463.

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 237 and also see "1.3.8 Conditional Admission" on page 238.

Normally, an applicant should have at least one course in social science research methods and one undergraduate introductory course in statistics. Applicants must forward official transcripts and send a short statement of interests which includes a description of previous employment, and research or other work relevant to the candidate's proposed graduate studies. Letters of recommendation from people who know the candidates and are familiar with their work are required.

A cheque or money order for $75 (Canadian), made payable to Simon Fraser University, should be submitted with the application form.

Deadlines for completed applications, for entrance commencing 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 elect 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 defence 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

and one of
CRIM 861-3 Research Methods II
CRIM 862-3 Research Methods III
CRIM 863-3 Research Methods IV

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 as least six credit hours selected from additional graduate curriculum course offerings.

The practicum component is met by satisfactory completion of a supervised one semester field placement in a criminal justice related agency.

The project requirement includes completion of a field research project related to the field placement and preparation of a project report. The project report will not normally be 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 procedure described in Graduate General Regulation 1.8.2.

PhD Program
Admission Requirements
The minimum university doctoral requirements for admission are provided in "1.3.4 Admission to a Doctoral Program" on page 238 in the Graduate General Regulations section. Normally, an applicant should have at least one course in social science research methods and one undergraduate introductory course in statistics. Direct admission may be approved for persons with a criminology master's, a master's in a discipline other than criminology and, under exceptional circumstances, with an
undergraduate degree or its equivalent provided that a CGPA of at least 3.5 has been maintained. Applicants must submit a statement of research interests and at least two examples of previous academic work. In exceptional circumstances, undergraduate degree holders (or equivalent) may be admitted with a BA if they meet University regulations, have demonstrated original undergraduate research, and are 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 semester following 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. A cheque or money order for $75 (Canadian), made payable to Simon Fraser University, must be submitted with the application form. The school must receive the completed application, for entrance to the fall semester, by February 1. Applicants are 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, the school emphasizes that this is not considered a good practice.

Degree Requirements
PhD candidates must take a 33 credit hour minimum consisting of:
- at least three research methods courses (nine hours)
- theories of crime I (three credit hours)
- seminar (three credit hours)
- at least eighteen credit hours selected from additional curriculum offerings
- achieve satisfactory completion and oral defense of an original PhD thesis

A maximum of nine hours may be taken in another department or university with supervisory committee and the graduate program committee approval. These courses may be accepted as partially meeting the requirements for any courses in the PhD program. All students write comprehensive exams in two of the five core areas of the curriculum. Normally, students are expected to finish courses and comprehensives within two years of entering the program.

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 semester after comprehensive exams are passed, candidates develop a thesis prospectus based on original research defining the proposed investigation and demonstrates the relationship between the prospectus and the 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 the provisions of "1.9.3 Examining Committee for Doctoral Thesis" on page 242 in the Graduate General Regulations section.

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 241 of the Graduate General Regulations.

Department of Economics
3602 Diamond Building, 604.291.3562/3508 Tel, 604.291.5944 Fax, www.sfu.ca/economics
Chair (to be announced)
Graduate Program Chair
K. Kasa BSc (Calif), MA, PhD (Chic)

Faculty and Areas of Research
See "Department of Economics" on page 148 for a complete list of faculty.

D.W. Allen – microeconomic theory, industrial organization
D. Andollatto – dynamic general equilibrium theory, macroeconomics, labor markets, monetary theory
J. Airlie – macroeconomics, monetary theory, learning and adaptation in economics
P. Curry – microeconomic theory, law and economics
D.J. DeVore – development, immigration, demographic economics
G. Dow – microeconomic theory, theory of organization
G. Dunbar – macroeconomics, applied microeconomics
S. Eastin – international trade, economic history
J. Friesen – labor economics
R. Gençay – time series methods, financial econometrics, computational economics
R.G. Harris – international economics, economic theory
T.M. Heaps – natural resources, regional, mathematical economics
D.S. Jacks – economic history, international trade and finance
R.A. Jones – monetary theory, macroeconomics, finance
A.K. Karavankal – 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. Laverger – economic theory, applied microeconomics
C. Lülfesmann – contract theory, industrial organization
F. Martin – macroeconomics, public finance, monetary theory
S. Mongrain – public finance, microeconomic theory
G.M. Myers – public and urban economics
N.D. Oleviller – natural resources, environmental economics
K. Pendakur – labor economics, public finance
C.G. Reed – economic history, applied microeconomics
M. Reikas – 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. Schwidt* – industrial organization, international trade, public policy toward business
Z.A. Spindler – public choice
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 237 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. thesis option – seven courses including core work plus an optional 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 237). 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 semester in the program.

Co-operative Education
This optional program gives MA students work experience that complements academic 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 semesters. Arrangements are made through the Faculty of Arts and Social Sciences co-op co-ordinator at least one semester in advance (see page 231). To participate in co-operative education, 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 238. Also required is an MA with graduate work in core areas equivalent to ECON 802, 807, 835 and 836. An MA core must be taken or readings course(s) with at least one course(s) in the department. Normally, every MA 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 taken from those normally offered at the graduate level by this or other related departments. Normally, a student must take at least five courses of regular and scheduled course work within this department; exceptions to this rule must be approved by the student's supervisory committee and the graduate program committee.

2. Successful performance in written comprehensive examinations.

2.1 Students specializing in economics write comprehensive examinations in economic theory and one other field. In addition, students must complete a field either by successfully taking two courses approved by the graduate program chair (other than required or readings courses) with at least an A-, or a comprehensive examination in the field. The economic theory comprehensive exams consist of separate examinations in micro and macroeconomics. The microeconomics comprehensive exam consists of a written examination in economic theory organized as a comprehensive examination in microeconomics theory, and includes topics and readings covered by ECON 802, 803, and 804. The microeconomics comprehensive exam usually encompasses the topics and readings covered by ECON 802, 803, and 804. The macroeconomics comprehensive exam usually encompasses the topics and readings in ECON 807, 808, and 809. Comprehensive exams in other fields normally encompass topics and readings presented in the main courses in those fields.

2.2 Students specializing in economics and business administration must write a comprehensive examination in economic theory or one other field. Any student who performs unsatisfactorily is subject to the review of unsatisfactory progress described in "1.8.2 Review of Un satisfactory Progress" on page 241 of the Graduate General Regulations.

Dissertation Procedures

A thesis proposal seminar will be given by each candidate in fulfilling the ECON 900 course requirement. ECON 900 will be taken in the summer semester following completion of the student's theory 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 departmental seminar. 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 thesis research paying due regard to the comments that have been received.

A thesis core and a thesis seminar should be given by each candidate after the supervisory committee agrees that the thesis is substantially complete and before it is formally approved for defense. 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.

The thesis defence. Procedures for this defence are described in the Graduate General Regulations (see "1.11 Publication of Thesis" on page 243).

Satisfactory Performance

Each candidate's progress is assessed at least once a year (fall). Any student who performs unsatisfactorily is subject to the review of unsatisfactory progress described in "1.8.2 Review of Unsatisfactory Progress" on page 241 of the Graduate General Regulations.

Research on Immigration and integration in the Metropolis

4653/4655 Diamond Building, 604.291.4575 Tel, 604.291.5336 Fax, www.rim.metropolis.net/ RIIM is one of four Canadian research centres studying the impact of Canadian immigrants on local economies. RIIM focuses on economic, political and cultural issues of immigrant integration in cities. RIIM concentrates only on Vancouver but has links to all other Canadian metropolitan sites and the world. The 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, 604.291.3136/4614 Tel, 604.291.5737 Fax, www.sfu.ca/english

Chair
T. Grieve BA, MA (S Fraser), PhD (Johns H)
Graduate Program Chair
M. Linley BA (Wlaur), MA, PhD (Qu)
Faculty and Areas of Research
See "Department of English" on page 150 for a complete list of faculty.

S. 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 and literary theory. Canadian, diasporic theory
R.M. Coo – rhetorical theory and history, contrasteive 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, obscurity, British Imperialism
S. Collins – American literature, Modernism, contemporary poetry and poetics
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
S. Delany – Chaucer, medieval comparative literature, middle English, Tudor literature, Marxism criticism, early literature (Old Testament, Middle Eastern and Greek), critical theory, gender in art
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. Everett – colonial, early American and transatlantic print culture, history of the book, authorship
C. Gerson – Canadian literature and literary history, women and literature, print culture in Canada
M. 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 aesthetics, intellectual history, the relationship between material and literary artifacts
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. Symons – Medieval literature, Middle English romance, Chaucer, manuscript and print culture, popular culture, critical theory
D. Stuck – American literature, Canadian literature
S. Zwartveld – rhetoric and writing, speech act theories, gender and discourse, American literature

MA Program

Admission Requirements

In addition to requirements in the Graduate General Regulations (page 237), 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 intending to specialize in writing and rhetoric may wish instead to submit a portfolio of representative writings, which should include at least one academic paper.

Programs

This program develops scholars with a critical and comprehensive awareness of English studies. Students concentrating in writing and rhetoric will normally have a substantial background in English
studies, but may come from a variety of backgrounds. While offering specialization in one of various areas of strength in the department, the program requires students to ground their interest 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.

The program may be completed in two ways. In option A, students take four courses, write a thesis of about 100 pages, and defend it in an oral examination. Option B requires six courses and an MA final paper which is then defended in an oral examination. Students in either option may have one course as an individually supervised study to pursue a special interest or satisfy a need.

Students may enrol in one or two courses per semester. Students who are teaching assistants will complete six courses per semester. For further departmental requirements consult the departmental handbook.

The department recognizes the special needs of working people who wish to improve qualifications. Some graduate courses are regularly offered at night.

Specialization in Print Culture 1700-1900
The MA program also permits students to specialize in the politics of print culture (1700-1900), focusing on the changing role of printed texts in an emerging commercial society. This specialization has an interdisciplinary focus.

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 accommodated 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 238.

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 an average above the minimum. If progress is deemed unsatisfactory, withdrawal under section “1.8.2 Review of Unsatisfactory Progress” on page 241 of the Graduate General Regulations may be required.

Option A students take four courses, 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 semester following the completion of course work. Supervisory committee approval after the completion of the thesis prospectus and the graduate program committee.

Option B 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 semester 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.

Language Requirement
All MA students must demonstrate a reading ability in one language other than English, the choice of which must be acceptable to the supervisory committee. This requirement may be fulfilled by completing two (one-semester) undergraduate courses in another language, or by passing a time-limited exam consisting of the translation of a literary or scholarly passage in that language. A dictionary is permitted.

For further information and regulations, see “1.1 Degrees Offered” on page 237.

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 page 285.

PhD Program
Applicants to the Department of English’s selective PhD program will have a well planned project that integrates into 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 has strengths in major areas of 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; as well as 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 PhD program is designed to be completed, normally, 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 gap, extra undergraduate or graduate coursework 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 letters of reference, two samples of academic writing, and a one to two page description of the doctoral project are required. For general admission requirements, see “1.3.6 Admission” on page 237.

Application Deadline
February 1

Residence Requirement
Six semesters

Program Requirements
The first two years of the program involve course work, field examinations, and a thesis prospectus to provide necessary grounding before students pursue a thesis project. In the third year, students engage in the research and writing of the dissertation. Upon admission, the graduate chair functions as advisor until a senior supervisor and supervisory committee are confirmed. Each student will be matched with a potential senior supervisor, normally on an ad hoc basis. The supervisory committee for the program, and the supervisory committee should be formed during the first year of the program and no later than the beginning of the field exams. Student and senior supervisor are encouraged to meet early in the program of study.

Language Requirement
PhD students must demonstrate a reading ability in a language other than English that is acceptable to the supervisory committee. For further information and regulations, see “Graduate General Regulations” on page 237.

The program’s three stages: course work; field exams and thesis prospectus; thesis and oral defence.

Courses
By the third semester’s end, the student completes five regular courses, at least one of which must be outside the student’s area of specialization. As well, the student takes ENGL 880/881, the graduate professional development seminar. The senior supervisor in consultation with the graduate program chair advises students about their course choices.

Field Exams and Thesis Prospectus
The field exam process will begin at the start of the third doctoral studies semester normally in the first summer semester, and must be completed by the end of the sixth semester. There are two fields to be taken consecutively in the fourth and fifth semesters. The thesis prospectus is written in the sixth semester.

The format of the field exams is the take-home essay, written in the course of a week and graded pass/fail. In exceptional cases a distinction will be recognized. Should a student fail a field exam, he or she will be allowed to repeat it, not later than the following semester. A second failure will require a review of the student’s progress in the program. Normally, students who fail two field exams will be required to 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 (http://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 committee for the primary field, 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 purpose of the secondary field examination paper is to ensure a comprehensive expertise in an area of study distinct from, but providing a basis of knowledge useful, to the student’s field of specialization. The department offers fields in three general areas, historical, geographical, and theoretical, and may entertain proposals for other fields if faculty and library resources are sufficient and if they seem academically appropriate.

Primary Field
The primary field examination is designed to ensure that students have a broad knowledge and understanding of the literature, historical contexts and critical history of the primary field of English studies germane to their dissertation area and in which they will be claiming expertise as university-level teachers and scholars.

Thesis Prospectus
The thesis prospectus helps to guide the student toward defining a significant thesis topic and is undertaken normally in the sixth semester of the PhD program, 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 regularly (at least three times a semester) through the
field exam period, the thesis prospectus semester, and the thesis research and writing period. The completed thesis is defended in an oral examination. 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 of English, and an external examiner who is not a member of Simon Fraser University.

Department of French

Chair
P.M. Wrenn BA, MA, PhD (Tor)
Graduate Program Chair
R. Canac-Marquis BA, MA (UQAM), PhD (Mass)
Faculty and Areas of Research
See “Department of French” on page 155 for a complete list of faculty.
R. Canac-Marquis – transformational syntax, morpho-syntax, formal semantics, anaphora, second language acquisition.
R. Davison – 18th century French literature, correspondence and pedagogy, women writers, émigré writers.
L. Frappier – French Renaissance literature, French humanist tragedy, royal entries, Québécois theatre.
M.C. Fauquenoy – French linguistics, sociolinguistics, Creole French dialects.
C. Guillault – experimental phonetics, applied linguistics, morphology, speech perception.
G. Merler – modern French and Quebec literatures, methods of discourse analysis, Stendhal, individual psychology and literary analysis, poetry.
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.
P.M. Wrenn – text linguistics, experimental phonetics, Canadian French, phonostylistics, phonology.

The department offers graduate research leading to an MA, with a concentration in either French linguistics or French literature. Students interested in French as a second language (FSL) should contact the graduate program chair. (The FSL option will be of particular interest to candidates contemplating a career in the teaching of French.) Students seeking PhD program admission may apply under the 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.

MA Program

Admission Requirements
Candidates for admission must satisfy the general admission requirements for graduate studies as shown in “1.3.2 Admission to a Graduate Diploma Program” on page 237 and “1.3.8 Conditional Admission” on page 238 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. This may be accomplished through satisfactory completion of one or two semesters as a qualifying student (see “1.3.5 Admission Under Special Arrangements” on page 230).

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 240) that has been appointed by the end of the second semester.

Students are normally admitted initially to the MA without thesis option. Those wishing to transfer to the MA with thesis or MA with project option may do so after completion of their second semester in the program, on the recommendation of their supervisory committee, and subject to the approval of the graduate studies committee. Program requirements: course work, thesis topic, project topic or area of field examination, as well as any additional requirements, must be approved by the supervisory committee and the 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 must successfully complete a minimum of 15 credit hours of graduate course work from their chosen concentration, either in linguistics or in literature. Within the 15 hours, with the approval of the senior supervisor, students may take up to five credit hours outside the Department of French. In addition, students complete a thesis of about 100 pages that is defended at an oral examination as described in sections 1.9 and 1.10 of the Graduate General Regulations. Students must submit a written thesis proposal no later than one semester following the completion of course work. Substantive work on the thesis may proceed only after approval of the thesis proposal by the supervisory committee and the graduate studies committee.

MA with Project
Students selecting this option are required to complete a minimum of 20 credit hours of graduate course work. Fifteen hours must be completed within the Department of French. With the approval of the senior supervisor, up to five credit hours may be completed by taking a course outside the department. In addition, students must complete a project that makes a contribution to French linguistics, French/Francophone literature or FSL pedagogy which is to be submitted for oral examination. The project may involve a practical component in a non-traditional format. Students must submit a written project proposal no later than one semester following the completion of course work. Substantive work on the project may proceed only after approval of the project proposal by the supervisory committee and the 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 level 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
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 Varètes 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
This joint master’s program allows students who have already been trained in both literatures to continue studies beyond the undergraduate level.

Students register in and, if successful, receive a degree from one of two departments, known as the home department. The other department 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 semesters of course work, will have the option of completing an MA either with thesis or without, subject to the agreement of both departments.
Supervision
The department selects a 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, both of ENGL 810-5 Graduate Professional Development Seminar Part I and ENGL 811-5 Graduate Professional Development Seminar Part II.

Concentration Requirements
In addition to the home department requirements shown above, students must also complete either the MA with thesis or without thesis option.

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 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 241 and "1.10 Examinations" on page 242.

MA without Thesis
For this option, students successfully complete another 30 credit hours selected from literature courses in the Departments of French and English, including at least two courses from each department (two courses from one department and four from the other, or three from each department) and a written field examination based on three completed courses. Field exam preparation is undertaken on the advice of the supervisory committee.

Department of Geography
7123 Robert C. Brown Hall, 604.291.3321 Tel, 604.291.5841 Fax, www.sfu.ca/geography
Chair
E.J. Hickin BA, PhD (Syd), PGeo
Graduate Program Chair
N.K. Blomley BSc, PhD (Brst)
Faculty and Areas of Research
See "Department of Geography" on page 158 for a complete list of faculty.

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 Department of Geography in the Faculty of Science (page 316). 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 cumulative GPA of 3.25 is required for entry. Admission is in the fall semester and applications should be completed by February 1. Admission requires a command of quantitative techniques and qualitative methodologies.

Degree Requirements
All MA candidates are expected to complete the requirements (30 credit hours) in six semesters. The MA program requires a thesis (18 credit hours). The remaining 12 credit hours are 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 their proposed research at a one day conference (Research Day) held annually in the spring semester. A written proposal should be submitted to the student’s supervisory committee, defended in colloquium and approved by the end of the second semester. The completed thesis will be judged by the candidate’s examining committee at an oral defence.

Course Requirements
GEOG 600 and 601 are seminars on graduate studies in geography which are offered each fall and spring semester. Grading is on a satisfactory/unsatisfactory basis. Attendance is compulsory in order to obtain a satisfactory grade. GEOG 604 is required for MA students and is offered every year. With the advisor’s consent, the student can request that this be replaced by another course. One of GEOG 620 and 640, Special Topics courses, will normally be offered each year depending on students’ research interests. All other courses are offered less frequently, dependent 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 316).

PhD Program
For admission requirements, see “Graduate General Regulations” on page 237. 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 semester.

Degree Requirements
The advisor, and subsequently the supervisory committee, and the student determine a program of study to suit the background and research objectives of the candidate. After consultation with the supervisory committee, however, students can elect, or may be required to take courses in order to acquire knowledge and skills, including language skills, relevant to their research.

Qualifying Examination
Written and oral qualifying exams establish competence to proceed with doctoral thesis research and are taken at the end of the second residence semester and no later than the end of the third. Students who fail the written or oral exam may retake each one, after a one-semester lapse.

Both parts of the qualifying examination must be successfully completed by the end of the fourth residence semester. 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 semester. 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 237.
Department of Gerontology

2800 Simon Fraser University Vancouver, 604.291.5065 Tel, 604.291.5066 Fax, gero@sfu.ca, www.harbour.sfu.ca/gerontology/

Chair
A.V. Wister HBA, MA, PhD (Wcont)

Graduate Program Chair
H. Chaudhury BA (B'desh Engin), MSC Architecture (Tex), PhD (Wisc)

Faculty and Areas of Research
See “Department of Gerontology” on page 160 for a complete list of faculty.

H. Chaudhury – design for dementia, place-based reminiscence, long term care and self in dementia

G.M. Gutman – seniors’ housing, long term care, dementia, health promotion/population health and aging, program evaluation

B. Mitchell* – families and aging, intergenerational relations, youth transitions, quantitative methods, health promotion and social policy

N. O’Rourke – geriatric depression, personality and mental health, test construction/validiation, caregiving

A.V. Wister – social demography, healthy lifestyles, environment and aging, program evaluation, design and statistical methods

*joint appointment with sociology and anthropology

Advisor
Ms. A. Barrett, 2800 Simon Fraser University Vancouver, 604.291.5065

A master of arts degree with two concentrations is offered: environment and aging; and health and aging. The program prepares students for professional roles with high level current knowledge, and substantial competence in research tasks necessary to undertake those roles. It also provides focused, interdisciplinary training for individuals in occupations offering services to older adults. Furthermore, students in the program will develop an appreciation of the complex ethical issues that are faced by persons working with older adults.

Each concentration deals with specific problems and issues. The environment and aging concentration teaches planning, design, research and evaluation of working, living and recreational environments for older persons including families and community environments. Students will have backgrounds in architecture, interior design, urban and regional planning, social/human ecology, kinesiology, recreation and leisure studies, occupational therapy, physiotherapy, human factors, human geography, sociology or environmental or social psychology.

The health and aging concentration provides knowledge applied to research, evaluation and critical analysis of health care systems and specific health promotion strategies. Students with degrees in psychology, sociology, demography, health sciences, medical geography, social work, nursing, health education, physiotherapy, physical education or kinesiology would be probable candidates.

Students take a core methods course and electives selected from the two concentrations. The program builds upon the expertise, research activities, clinical experience, and international reputation of the associated Gerontology Research Centre.

MA Program

Admission Requirements
Applicants should consult the Department of Gerontology web site for application information, or contact the student advisor.

Candidates who have not completed the post baccalaureate diploma in gerontology or have a minimum of five upper level courses with substantial aging content may be advised to complete courses from the diploma program prior to applying to the MA program.

Applications for fall admission should be completed by January 30 of that year and applications for spring admission by September 30 of the previous year. The following prerequisites, or their equivalent, are needed for each concentration.

Environment and Aging
GERO 401-3 Aging and the Built Environment
Health and Aging
one of
GERO 302-3 Health Promotion and Aging
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 404-4 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 Adulthood and Aging *recommended

All students will also be required to complete at least one undergraduate methods course.

Under special circumstances, students may be admitted without at least one prerequisite course.

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. They also 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 of all students.

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 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 888-4 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 237.

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. Students are encouraged to engage in original and innovative research to meet this requirement. Committee selection and approval of the thesis proposal will follow the same steps as the project. The thesis requirement must meet the guidelines in the “Graduate General Regulations” on page 237.

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 semester.

Department of History

6022 Academic Quadrangle, 604.291.4467 Tel, 604.291.5837 Fax, www.sfu.ca/history

Chair
J.S. Craig BA, MA, PhD (Camb), FRHistS

Graduate Program Chair
(to be announced)

Faculty and Areas of Research
See “Department of History” on page 161 for a complete list of faculty.

F. Becker – East Africa, Muslim Africa
E. Chenier – Canada
L. Clossey – wider world
J.S. Craig – early modern England
A.S. Dawson – Latin America
C.I. Dyck – modern Britain
J. Eyferth – modern China
D. Ferguson – 20th century United States
J. 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.T. Kühn – Middle East
M. Leier – Canada, labor
J.J. 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. Stubb – 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

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of PhD applicants, will be considered for admission. 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 student’s stated research priority.

**Admission Requirements**

Admission for MA and PhD students will be in the fall semester only. Applications for fall 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 semester. 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.

**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 years of the undergraduate program. 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 240 for supervisory committee information. All MA degree candidates must satisfy the following minimum requirements, totaling 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 semester, 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, each thesis option student writes a paper which becomes the thesis basis. It should present a coherent thesis topic and place within the framework of existing area work. Each project option student writes 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 semesters, and project option students in a maximum of three semesters. Part time thesis option students complete degree requirements in a maximum of eight semesters and part time project option students in a maximum of six semesters.

- Students with significant financial support from fellowships or teaching assistantships are expected to take a full semester 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 semester.

- Students complete a thesis of 10 credit hours with a maximum length of 100 pages, or a research project of approximately 35 pages. The student’s thesis/research project must demonstrate capability in scholarly research and procedures as well as independent critical thought. Before the beginning of the third semester, thesis option students defend the thesis prospectus before an examining committee made up of the supervisory committee and the graduate program committee chair. The project option student will defend his/her research project in the same time frame.

- Full time thesis option students complete their degree requirements in a maximum of five semesters, and project option students in three. 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 to 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 Supervision” on page 240 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 semester. 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 the reading lists, are offered twice a year in the first half of the fall and spring semesters. Written exams are administered in weeks five and six. Oral exams are scheduled in weeks six through seven of the same semester. Students who miss the first round of examinations in their fourth semester due to extenuating circumstances must take the exams the following semester. For details on the nature of the comprehensive examinations, see the Department of History’s graduate brochure. All written examinations must be passed before the oral comprehensive exam takes place. A student who fails one of the written examinations, and one only, will have one additional chance for re-examination before sitting the oral examination. A fail, “pass,” or “pass with distinction,” will be assigned by the examining committee after completion of the oral exam. Students failing at this stage are not allowed 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
gender and history
rural history
mediaval 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 since 1890
United States cultural history 1830-1890
colonial Latin America
Latin America since Independence

**Thesis**

Within one semester 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 examine the student on the thesis and in the student’s major field of study. See “Graduate General Regulations” on page 237 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, 604.291.3518 Tel, 604.291.5799 Fax, www.sfu.ca/las

Director
G. Otero BA (IT Monterrey), MA (Tex), PhD (Wis)
Graduate Program Director
G. Otero BA (IT Monterrey), MA (Tex), PhD (Wis)

Faculty and Areas of Research
See "Centre for Latin American Development Studies" on page 167 for a complete list of faculty.

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 237 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 goals in Latin American development studies
- proof of reading and speaking competence in Spanish or Portuguese equivalent to the successful completion of three college level courses (i.e., SPAN 102, 103, 201). At the discretion of the Latin American development studies graduate program committee, proof of competence in another language of Latin America and the Caribbean may be accepted in exceptional circumstances.
- if applicable, a resume of previous relevant course work and/or employment will be considered. Background may include specialized training, exposure to interdisciplinary studies of Latin America, and/or first hand field experience.

MA and/or USFBA programs admission is conditional on the availability of a senior supervisor selected only from Latin American development studies and/or associated faculty.

MA Requirements
The student must complete the following minimum requirements.

- The following four courses: LAS 800 (offered biennially); SA 857 (or equivalent with approval of the supervisory committee) and two courses, one of which must be an LAS course (LAS 815, 825 or 835). The other can be an LAS directed readings course (only one directed readings course allowed) or one graduate course in another department or university that is designated by the program with full Latin American content, or more broad graduate courses in related disciplines that focus on Latin America. Credit for the latter is subject to student’s academic suitability. In addition, more broadly listed courses may be accepted if focused on Latin America. However, credit is subject to their designation as full content Latin American courses by the Latin American development studies graduate program committee. Some are:
  - CMNS 845-5 Communication Knowledge Systems and Development
  - ECON 855-4 Theories of Economic Development
  - GEOS 622-4 Theories and Practices of Development
  - POL 839-5 Government and Politics of Developing Countries
  - SA 850-5 Advanced Sociological Theory
  - SA 870-5 Advanced Anthropological Theory

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 238.

Liberal Studies Program

2100 Simon Fraser University Vancouver, 604.291.5152/5104 Tel, 604.291.5159 Fax, www.sfu.ca/gls, glsp@sfu.ca

Director
M.D. Fellman AB (Mich), PhD (Northwestern)
Graduate Program Chair
A.M. Feenberg-Dibon, Diplome d’Etudes Superieures (Sorbonne), PhD (Cali)

Steering Committee
J.L. Berggren, Mathematics
L. Burton, Humanities
S. Duguid, Humanities
A.M. Feenberg-Dibon, Humanities
M. Fellman, History
J. Jones, Engineering
J. Martin, Education
K. Mezei, English
G. Poltjas, Business Administration
P. Schouls, Emeritus
J. Sturrock, Emeritus

Adviser
Ms. J. Koczwarz, 2129 Simon Fraser University Vancouver, 604.291.5152 Tel, koczwarz@sfu.ca

This program, which leads to a master of arts, liberal studies, is designed 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 provide the opportunity for wide reading, careful reflection, and intense discussion. They are taught by Simon Fraser University faculty 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 semesters. 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 semester. 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 242. 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 supervisory 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 semester. 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 concern of the 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, 604.291.4725 Tel, 604.291.5659 Fax, www.ling.ca/linguistics
Chair
Z. McBride UDip, Dipl, PhD (Edvöös Loránd, Budapest), PhD (Melit)
Graduate Program Chair
(to be announced)
Faculty and Areas of Research
For areas of research, refer to the department listed.
M. Boelshauser Ignace, First Nations Studies, Sociology and Anthropology
F. Polowich, Computing Science
W. Tumbull, 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’s faculty. 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 238 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; a PhD student in three years after the MA. See “Graduate General Regulations” on page 237.

MA Program
Admission Requirements
Students must demonstrate adequate linguistics preparation. It is not possible for those having little or no academic linguistics preparation to gain course program admission or admission as a qualifying student. See “1.3.5 Admission Under Special Arrangements” on page 238 and “1.3.4 Admission to a Doctoral Program” on page 238 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 and 801.

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 linguistics background. 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 237 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 semester. The written proposal must be approved by the supervisory committee prior to the start of substantive research.

PhD Thesis
Students must complete the thesis in accordance with regulations.

Language Requirements
Candidates must show a high degree of competence in two languages besides English with some knowledge of the structure of at least one non-Indo-European language. The supervisory committee determines how the student demonstrates this competence.
Department of Philosophy

4604 Diamond Building, 604.291.3343 Tel, 604.291.4443 Fax, www.sfu.ca/philosophy
Chair (to be announced)
Graduate Program Chair
M. Hahn BA (S Fraser), MA (Br Col), PhD (Calif)

Faculty and Areas of Research
See “Department of Philosophy” on page 172 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
R.E. Jennings – modal logic, conditional logic, philosophy of language
K. Laird – philosophy of mind, metaphysics
J.S. McIntosh – philosophy of mind, philosophy of science, metaphysics
F.J. Pelletier – philosophy of language, logic and linguistics, cognitive evidence, automated theorem proving, artificial intelligence, formal and computational semantics
O. Schulte – philosophy of science, epistemology, logic, rational choice theory
L. Shapiro – history of modern philosophy, feminism, philosophy of mind, epistemology, philosophy of personal identity
E. Tiffany – ethical theory, philosophical psychology, philosophy of mind and language
D. Zimmerman – ethics, social and political philosophy, philosophy of mind, medical ethics

Application Procedures
Please contact the department for an application packet, deadline and other information.

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

History
PHIL 852, 853, 854, 855

The following are Directed Studies courses.

PHIL 880, taken in the first graduate study year.

There is one additional course required.

Cumulative Grade Point Average
A CGPA of 3.5 is required.

PHIL 899
In this course, that is completed under the direction of the senior supervisor, a paper from a previously completed graduate course is revised to a standard suitable in form and content for submission to a professional journal. The resulting paper normally shall not exceed 30 pages.

Final Examination
The student will present the paper in a public forum directed by the supervisory committee and at least one other faculty member in the field. After the public presentation and discussion, the expanded committee will evaluate the paper and the student’s performance at the examination.

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:

• The student normally enters the program with a well-defined project and a permanent (as opposed to interim) senior supervisor.
• The program and a course of study is approved by the graduate studies committee.
• Up to three of the required courses may be from outside the Department of Philosophy.
• A thesis, normally no more than 100 pages in length, giving evidence of independent critical ability is submitted and successfully defended.
• The specialization is noted on the student’s final transcript under Committee Decisions.

Classic Thesis Option
This option has the following specific requirements:

• The candidate must complete at least one course in each of the following three areas of philosophy: value theory; metaphysics and epistemology; and history of philosophy.

• A thesis, normally not more than 100 pages in length, giving evidence of independent critical ability is submitted and successfully defended.

PhD Program

Admission Requirements
See “1.3.4 Admission to a Doctoral Program” on page 238 for university admission requirements. In addition, the applicant is expected to have either a 3.67 cumulative GPA in third year and subsequent philosophy courses. Honors degrees, where available, are preferred. The department pays close attention to letters of reference and writing samples. A student whose undergraduate work does not satisfy these conditions may be required to complete additional undergraduate courses, or to register as a qualifying student before consideration for admission.

Degree Requirements
These requirements apply to all MA candidates.

• completion of six courses, one of which may be a 300 or 400 level undergraduate course with an A-grade or better and graduate studies committee permission. One course must be the Pro-seminar, PHIL 880, taken in the first graduate study year.
• demonstrated competence in such foreign languages as the graduate studies committee requires for the proposed research.
• demonstrated competence in formal logic at the level of PHIL 210, or higher when relevant to his or her research.

There are three ways to complete a Master’s degree in the Department of Philosophy:

Non-Thesis Option
This is the recommended degree for most students applying for philosophy PhD program admission after completing an MA. The program broadens and deepens philosophical education and allows the student to develop the necessary materials for a successful PhD program application. The non-thesis option has the following specific requirements.

Distribution Requirements
The candidate completes at least one course in each of the following three areas 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, that is completed under the direction of the senior supervisor, a paper from a previously completed graduate course is revised to a standard suitable in form and content for submission to a professional journal. The resulting paper normally shall not exceed 30 pages.

Final Examination
The student will present the paper in a public forum directed by the supervisory committee and at least one other faculty member in the field. After the public presentation and discussion, the expanded committee will evaluate the paper and the student’s performance at the examination.

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:

• The student normally enters the program with a well-defined project and a permanent (as opposed to interim) senior supervisor.
• The program and a course of study is approved by the graduate studies committee.
• Up to three of the required courses may be from outside the Department of Philosophy.
• A thesis, normally no more than 100 pages in length, giving evidence of independent critical ability is submitted and successfully defended.
• The specialization is noted on the student’s final transcript under Committee Decisions.

Classic Thesis Option
This option has the following specific requirements:

• The candidate must complete at least one course in each of the following three areas of philosophy: value theory; metaphysics and epistemology; and history of philosophy.

• A thesis, normally not more than 100 pages in length, giving evidence of independent critical ability is submitted and successfully defended.

PhD Program

Admission Requirements
See “1.3.4 Admission to a Doctoral Program” on page 238 for university admission requirements. In addition, the applicant is expected to have either a 3.67 cumulative GPA in third year and subsequent philosophy courses. Honors degrees, where available, are preferred. The department pays close attention to letters of reference and writing samples. A student whose undergraduate work does not satisfy these conditions may be required to complete additional undergraduate courses as part of the program, to enter the MA program, or to register as a qualifying student before consideration for admission to the MA or PhD program.

Degree Requirements

Course Requirements
Eleven courses are required, including up to two 300 or 400 level courses, with an A-grade or better and approval of the graduate studies committee. One of the courses must be the Pro-seminar, PHIL 880, taken in the first year of Graduate study, unless it was already completed as part of an MA.

Distribution Requirements
The candidate must complete at least two courses in each of the following philosophy areas: value theory; metaphysics and epistemology; history of philosophy.

Substitute Courses
Up to four graduate courses taken here or at another institution prior to enrolling in the PhD program may, with the approval of the graduate studies committee, count toward course and distribution requirements.

Area Examinations
Three area examinations are required. Each area must fall within a different one of the following four categories: metaphysics and epistemology, value theory, logic/formal studies, and history of philosophy. Each examination is based on a reading list whose mastery shall not take more than one semester. See the department for further details.

Language Requirements
Students are required to demonstrate such competence in foreign languages as the graduate studies committee deems essential to the successful completion of their proposed research.

Formal Logic Requirement
In addition to other course requirements, students must either have or acquire competence in formal logic up to standard metatheory for first order logic, or higher when considered relevant to their research.

Dissertation Prospectus
The final step before advancement to candidacy (or ABD status) is the presentation and approval by the supervisory committee of a dissertation prospectus, consisting of a critical literature survey, an extended abstract, and an outline of the proposed dissertation. The candidate presents the proposed plan of study to the department at an open colloquium.

Preliminary Dissertation Examination
After completing at least one dissertation chapter, but well before completion, the student must pass the preliminary dissertation examination whose purpose is to determine whether the quality of the progressing
Graduate Studies

Fields of Study

Simon Fraser University 2006 • 2007 Calendar

Department of Political Science

6070 Academic Quadrangle, 604.291.5487 Tel, 604.291.5364 Fax, www.sfu.ca/politics/graduate/index.html
Chair
D. Laycock BA (Alta), MA, PhD (Tor) Graduate Program Chair (to be announced)
Faculty and Areas of Research
See “Department of Political Science” on page 174 for a complete list of faculty.

A.J. Ayers – global political economy, comparative development
J. Busumtwi-Sam – international organization and law, conflict management, political economy
L.J. Cohen – comparative government and politics – Soviet Union and Eastern Europe
M. Grissen Cohen – public policy, women’s studies, economics
M.A. Covell – comparative ethnic conflicts, African politics, comparative federalism
L. Dobinski – public policy/administration, political philosophy and political economy (rational choice)
L.J. Erickson – Canadian politics, political behavior, women and politics, political parties
G. Fuji Johnson – political philosophy, democratic theory, public policy
O. Hankivsky – public policy and political theory, gender, social and health policy
A. Heard – Canadian judicial and constitutional issues, comparative human rights
A. Hira – international political economy, Latin American studies
M. Howlett – public administration and policy, Canadian government and politics
T. Kawasaki – Japanese politics and foreign policy, international relations theory, and international relations in the Asia-Pacific region
D. Laycock – political philosophy and public administration/policy, Canadian government
S.J. MacLean – comparative development; political economy; African political economy
S. McBride – political economy, Canadian politics, globalization
P. Meyer – East Asian international relations, Russian foreign policy, comparative foreign policy
A. Moens – international relations, comparative politics, US politics
A. Perl – urban studies, public policy
D.A. Ross – international security and conflict studies, Canadian foreign and defence policies
P.J. Smith – public policy/administration, Canadian and comparative local government, Canadian government and politics, federalism
P.V. Warwick – research methods, comparative government, Western Europe

Fields of Study

The major fields of study are

Canadian government and politics
Comparative government and politics
International relations

Within these three major fields of study there are three distinct thematic emphases of: public policy, political economy and governance.

Admission Requirements

For general requirements see “1.3 Admission” on page 237. 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 prior 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 completion option must 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), 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, and 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.

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 examination, 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 approved by the supervisory committee. To fulfill 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 exam, and one only, may retake the failed field examination.

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 237 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 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 241 and “1.10 Examinations” on page 242.

Performance Evaluation
In accordance with the Graduate General Regulations (see “1.8 Progress, Withdrawal and Leave” on page 241), 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 department, which 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 243) 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
Chair
D.J. Weeks BA (Windsor), MSc (McM), PhD (Auburn)
Graduate Program Chair
N.V. Watson BA, MA (WOnt), PhD (Br Col)
Faculty and Areas of Research
See "Department of Psychology" on page 177 for a complete list of faculty.
K. Bartholomew – adult attachment, abuse in intimate relationships, male same-sex relationships
B.L. Bayerstein – drugs and behavior, brain and behavior, sensation (olfaction), critical appraisal of occult and pseudo-scientific claims
M. Bias – 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 on 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 – behavior therapy, health psychology, sport psychology, psychology and law
K.S. Douglas – violence, risk assessment and management, mental disorder and violence, forensic assessment, law and psychology
R.T. Foulds – multivariate statistics, statistical modelling, measurement
S.D. Hart – psychology and law, psychopathy, mentally disordered offenders, violence, wife assault, psychological assessment, personality disorder
G. Iarocci – developmental psychopathology, autism, development of visual attention and perception, risk and protective factors and cultural identity in the development of first nations children
W.R. Krane – multivariate statistics, psychological scaling, psychometric theory
D.L. Krebs – evolution of morality and self-deception
R.G. Ley – forensic psychology (criminal and civil), trauma and PTSD, adolescent psychopathology and delinquency, psychodynamic psychotherapy
M. Lioti – neuroscience of emotion in health and disease, normal and abnormal development of executive control functions, brain functional reorganization in neuropsychiatric disorders
M.D. Maraun – psychometrics and philosophy of science
J.J. McDonald – cognitive neuroscience, human electrophysiology, event-related potentials, attention and cross-modal processing, error processing
C.G. McFarland – social cognition, autobiographical memory, mood and social judgment, social and temporal comparison processes
R. Mistbeger – behavioral neuroscience, biological psychology, and structural brain changes in schizophrenia and severe mental disorders, neuropsychology of mental illness
M.M. Moretti – self, attachment and psychopathology; developmental psychopathology particularly conduct disorder, aggression and violence in girls; systemic intervention; program development and evaluation
J.D. Read – memory in forensic contexts, applied cognition, recovered memory debate and memory impairments, autobiographical memory and eyewitness testimony
R.M. Roesch – psychology and law, including forensic assessment, jail mental health, competency to stand trial, juvenile delinquency
M.T. Schmitt – collective identity, responses to social inequality, political attitudes and ideology
K.L. Stanley – history of psychology, philosophy of science, introductory and advanced statistics, measurement
B.W. Sokol – development of children's thinking, social-cognition, moral development, adolescent identity development, history and systems, culture and cognition
T.M. Speake – visual attention; cognition; memory; word recognition; controlled vs. automatic processing
A.E. Thornton – adult clinical neuropsychology, neurocognitive models of memory and executive functions, encoding and retrieval processes in cognitively impaired patients
W.L. Thornton – positive and negative modifiers of cognitive aging, everyday problem-solving and decision-making, executive function, clinical neuropsychology
I. Torres – clinical neuropsychology: cognitive deficits, and structural brain changes in schizophrenia and severe mental disorders, neuropsychology of mental illness
W. Turnbull – social pragmatics, conversation analysis, social/cognitive development
N.V. Watson – sexual differentiation of the nervous system, hormones and behaviour, neuropsychology, psychopharmacology, sex differences in humans and non-human animals
D.J. Weeks – attention, perceptual-motor behavior, stimulus-responsue translation, cerebral specialization in Down syndrome, human-machine interaction
B.W.A. Whitmer – pre-cognition, memory, perception, concept formation, attention
R.D. Wright – visual attention; cognitive neuroscience
S.C. Wright – Intergroup relations/social identity: responses to discrimination and collective action; prejudice and prejudice reduction; minority language education
A. Young – child psychopathology, anxiety, learning disabilities

Associate Members
For areas of research, refer to the department listed.
R.A. Corrado, Criminology
A. Horvath, Education
M. Jackson, Criminology
J. Martin, Education
N. O'Rourke, Gerontology
F.J. Pelletier, Philosophy
J. Sugarman, Education

Advisors
Ms. A. Turner, 604.291.4367, 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 areas specializations in child clinical, forensic clinical, and clinical neuropsychology. Area specializations are noted on transcripts.

Application and Admission Requirements
Applicants must submit all supporting documents in one complete package (statement 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 Records Examinations [GREs], a CV, a check list, and if applicable, TOEFL and LSAT results), GREs, TOEFL and LSAT 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=application). Complete 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/dean-gradstudies/apply.htm). 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” on page 238). Applicants apply online on the Dean of Graduate Studies website (http://www.sfu.ca/dean-gradstudies/apply.htm). 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 post-secondary transcripts to the graduate program assistant no later than one month prior to the semester 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 semesters.

Satisfactory Performance
The progress of each student is assessed at least once a year. 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.

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. 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 ethical integrity in 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 semester 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” on page 237.

**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” on page 237.

**Supervisory Committees**

For the MA thesis, students establish a supervisory committee before the end of their first semester in the program. The 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. The PhD supervisory committee should be established by the end of the first semester following program admission. Students choose a Department of Psychology faculty member as the senior supervisor and chair of the PhD supervisory committee and two or more additional members; at least one of the additional members must be from the Department of Psychology. One member must act as advisor to 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**

Students admitted to the MA program 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 program 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

As well, students must complete an additional PSYC 950 in each year past year four.

*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 897-3 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 Proseminar in Social Psychology (II) (area course 2)

PSYC 960-5 Seminar in Social Psychology (I) (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

As well, students must complete an additional PSYC 960 in each year past year four.

**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 and provides generalist and specialist training in the same areas as the experimental program. It offers specialization streams in child-clinical psychology, clinical-forensic psychology, and clinical neuropsychology, with a strong emphasis on research. The program is contingent upon maintenance of satisfactory performance in a) course-work, b) thesis work, c) practicum skills development, d) Comprehensive examinations, and e) adherence to professional ethical standards (CPA Code of Ethics, APA Ethical Principles, and CPBC Code of Conduct), as evaluated in the annual review of student progress. Unsatisfactory academic progress and/or violations of the CPA ethical code of conduct (including e.g., dishonesty, boundary violations) may lead to a requirement to withdraw from the clinical program.

**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 899 (comprehensive examinations in assessment, personality, psychopathology, clinical research design, intervention and ethics), PSYC 886 Internship, and PSYC 889 PhD Thesis.

Students will not be permitted to register in PhD course work beyond the seventh semester in the MA program, until the MA thesis is complete, or unless approved by the senior supervisor and the director of clinical training.

Students are required to enroll in PSYC 825 (ongoing clinical training) every semester 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 must successfully defend their dissertation proposals before applying for internship.

**Breadth/Domain Requirements**

Consistent with accreditation requirements for the Canadian Psychological Association (CPA) and the American Psychological Association (APA), students should select a breadth course to demonstrate competency in one of the following domains: biological bases of behavior, cognitive-affective bases of behavior, developmental/social bases of behavior, history and systems.
Clinical Specialization 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 Psychophatology (area course 3)
PSYC 807A-5 Advanced Topics in Interventions: Child Therapy

Additional Requirements
PSYC 807B-5 Advanced Topics in Interventions: Family Therapy
PSYC 914-1.5 Research Seminar

Law and Forensic Psychology Area: Clinical Forensic Stream
PSYC 790-3 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 Civil Forensic Psychology (area course 3)
PSYC 836-3 Special Topics in Criminal Forensic Psychology (area course 4)

Additional Requirements
PSYC 897-3 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
PSYC 907B-3 Advanced Topics in Biological Psychology: Neuropsychological Disorders
PSYC 907F-3 Advanced Topics in Biological Psychology: Cognitive Neuroscience
UBC Neuroanatomy 516

SFU/UBC Program in Law and Forensic Psychology

The Simon Fraser University/University of British Columbia (SFU/UBC) Program in Law and Forensic Psychology offers students in forensic psychology the option of completing both a PhD and an LLB degree. Students in the LLB/PhD stream specialize in either experimental psychology or law and/or in clinical forensic psychology. The program is operated co-operatively between Simon Fraser University and the University of British Columbia and provides opportunities for students to be on leave from one program while completing requirements in the other. Several courses are eligible for credit in both degree programs.

All regular MA and PhD requirements of the Simon Fraser University graduate studies faculties and psychology department must be met. Students admitted to the LLB/PhD stream complete the requirements for both an LLB in law and a PhD in law and forensic psychology. For application and admission information refer to Department of Psychology “Application and Admission Requirements”. Clinical forensic stream admission is approved by the clinical program to which the student has applied. Applicants seeking the LLB degree must also seek admission from and be deemed acceptable by the Faculty of Law at UBC. The PhD is awarded by Simon Fraser University Faculty of Arts and Social Sciences, and the LLB degree is awarded by UBC’s Faculty of Law. Students must satisfy all requirements for both the PhD and LLB degrees.

Program continuance is conditional upon a high performance standard as determined by an annual review of students. A student is permitted to complete either an LLB, MA, or PhD alone.

Public Policy Program

3271 Simon Fraser University Vancouver, 604.291.5289 Tel, 604.291.5288 Fax, www.sfu.ca/mpp, mpp@sfu.ca

Director
N.D. Olewiler BA (Col), MA (S Fraser), PhD (Br Col)
Senior Policy Fellow
D. McArthur BSc (Sask), MA (Tor), MA (Oxf)

Professors
J. Kesselman BA (Oberlin), PhD (MIT), Canada Research Chair
J.G. Richards BA (Sask), BA (Camb), MA, PhD (Wash, Mo)

Associate Professor
D. Gross Licence en Sciences Economique (U de Lausanne), MA (Carl), PhD (Tor)

Adjunct Faculty
B. Laplante BComm, MSC (Montr), PhD (Qu)
T. Peniket BA (WOnt)
M. Shafter BA (McG), PhD (Br Col)

Steering Committee
L. Dobuzinskis, Political Science
I. Geva-May, Education
M. Howlett, Political Science
D. McArthur, Public Policy
C.A. Murray, Communication
N.D. Olewiler, Economics
J.G. Richards, Business Administration
K.G. 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 semesters. The maximum course load is four courses per semester.

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 in determining eligibility for program admission.

Criteria for admission, in addition to undergraduate grades, include strong letters of reference, an essay, and for students 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
• A student whose first language is not English and whose undergraduate degrees were from institutions where English is not the language of instruction are required to submit TOEFL and Test of Written English scores
• GRE score for non-Canadian degree applicants

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 semester, 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
Graduate Program

3576 Simon Fraser University Vancouver, 604.291.5242 Tel, 604.291.5239 Fax, www.cscp.sfu.ca

Director
R.M. Lorimer BA, MA (Manit), PhD (Tor)

Professor
R.M. Lorimer BA, MA (Manit), PhD (Tor) – publishing policy

Instructor
G. Maxwell BA (Br Col), MPub (S Fraser)

Senior Lecturer
R. Woodward BA (Miami, Ohio), MA (Oregon) – design and production

Associate Members
A.C.M. Beale, Communication – history of communication
R. M. Coe, English – rhetoric and composition
A. Cowan, Continuing Studies – publishing education, editing and production
L. Copeland – Library
G. D. G. English – history of Canadian publishing
M. A. Gillies, English – Victorian publishing
M. Jordan – Library
G. A. Mauzer, Business Administration – marketing
B. Owen BA (S Fraser), MA (Br Col)
R. Smith, Communication – information technology

Adjunct Faculty
R. Barnes, MA (Camb) – economics, marketing consultant
R. Bringhurst, BA (Indiana), MFA (Br Col) – Author
J. J. Douglas, LLB (S Fraser) – retired publisher
Douglas and McIntyre
N. Flight, BA (Denison), MA (Bryn Mawr)
D. Gibson, MA (St. Andrews), MA (Yale) – publisher,
McClendon and Stewart
C. Good, BA, MA (Tor) – publisher, Penguin Canada
R. Hancox, Dip (Regent St. Polytechnic, London),
PMO, Neiman Fellow (Harv), Professional Fellow
A. MacDougall – president, Raincoast Books
P. Milroy, BA (Ont) – publisher, Canadian Medical Association
S. Osborne, BA (Br Col) – publisher, Geist Magazine
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,
Burnaby Public Library
J. Willinsky BA (Ont), MEd (Tor) PhD (Dali)

Advisor
Ms. J. Ray BA (S Fraser), 3576 Simon Fraser University
Vancouver, 515 West Hastings Street,
VancouvR, BC, V6B 5K3, 604.291-5242, jray@sfu.ca

This program leads to a master of publishing degree
(MPub) and is designed for those in, or intending to enter,
the publishing industry. It is composed of a set of courses,
an internship, and a project report, and encompasses a range of publishing activities
including business, design, editing and multimedia.

Admission Requirements

The normal admission requirement is a bachelor’s degree with a minimum 3.0 grade point average from
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
• have some demonstrated familiarity with
  the applications will be required to
• have some demonstrated familiarity with

Requirements

• have some demonstrated familiarity with the
  applicants will be required to
• demonstrated a suitable level of competence in
  English composition
• demonstrated a suitable level of competence in
  the knowledge and skills necessary, they may
  gain those skills by successfully completing the
  following courses or their equivalents.

Department of Sociology and Anthropology

5053 Academic Quadrangle, 604.291.3518 Tel,
604.291.5799 Fax, www.sfu.ca/sociology

Chair
J. Pulkingham MA, PhD (Edin)

Faculty and Areas of Research

See “Department of Sociology and Anthropology” on page 178 for a complete list of faculty.

• Atasoy – political economy, globalization, political
  sociology, development studies, gender relations,
  cultural politics, Islamic politics, Turkey, Middle East
  M. Boelshier Ignace – practice theory, language and
  culture, aboriginal resource management, aboriginal
  genome and neurosurgery
  J. Bogardus – critical anthropology, political sociology,
  critical pedagogy, participatory action research
  D. Chunn – feminism and law, critical media
  and family studies; historical sociology of crime, madness
  and social welfare
  D. Cullane – critical anthropology, anthropology
  of/and law and health, contemporary ethnography,
  visual anthropology
  P. DeMaio – medical sociology, income inequality,
  qualitative methods, Latin America
  P. Dossa – migration, gender and health, critical
  feminist anthropology, medical anthropology, aging
  and health policy, politics of disability
  N. Dyck – social, political, urban anthropology; sport,
  childhood, nationality; theories of tutelage, discipline
  K. Froshauer – new Canadian political economy,
  natural resource development, immigration
  entrepreneurship
  M. Gates – Mexico, Latin America, development,
  environment, narrative research
  M. Howard – Southeast Asian ethnography and
  material culture, textiles
  M. Kenny – social and cultural effects of genetics,
  health, and social and cultural issues
  D. Lacombe – contemporary social theory, sexuality,
  and moral panic, deviance and social problems
  A. McLaren – gender and intersectionality, sociology
  of education and families, social 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
  G. 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
  J. Whitworth – sociology theory in the European
  tradition, sociology of religion
  H. Wittman – environmental sociology, social
  movements, food and society, qualitative methods,
  Brazil and Guatemala

Admission Requirements

Programs of advanced learning and research leading to MA and PhD degrees are offered. The MA program is available on a part time and a full time basis.
See “1.3 Admission” on page 237 for general 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

- 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, gender 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 deviance

MA Program Requirements

The MA program may be completed through course work and either an essay or research project and require supervisory committee recommendation and department graduate program committee approval to transfer to the thesis option. Except under extenuating circumstances, students may transfer only once in the MA program.

Option 1: Courses and Extended Essays or Research Project Report

The minimum requirements for completion of the degree program include four one-semester courses, and two extended essays or one research project report.

Courses

Students must complete four one-semester courses, two of which must be SA 850 or 870; and SA 857. The remaining two courses will be chosen from SA 886, SA readings course, a course in another department or university. (The option of the readings courses and the extra-departmental courses must be approved by the student’s supervisory committee and the departmental graduate program committee. Any student with deficiencies may be asked to complete more courses.)

Extended Essays or Research Project Report

The extended essays or research project option requires the completion of either:

- two extended essays that will normally consist of no more than 35 pages each, inclusive of bibliographies, appendices and tables. At the discretion of the supervisory committee, the maximum number of pages may be increased. This will normally be done only to facilitate the inclusion of large appendices and/or tables. Each extended essay will normally elaborate upon research undertaken in course work.
- one research project report that will normally consist of no more than 70 pages, inclusive of bibliographies, appendices and tables. At the discretion of the supervisory committee, the maximum number of pages may be increased. This will normally be done only to facilitate the inclusion of large appendices and/or tables. Each research project will normally be designed by the supervisory committee in consultation with the student.

The extended essays and the research project reports should demonstrate capability in scholarly research as well as independent critical thought and will be examined by the student’s supervisory committee and a qualified external examiner.

Extended essays and research project reports will be bound and placed in the library.

Option 2: Courses and Thesis

The minimum degree completion requirements under this option include three one-semester courses and a thesis. To transfer to this option, students submit a thesis proposal to the supervisory committee at the end of the first semester of program enrollment. Supervisory committees may then recommend transfer to the department graduate program committee. See the department handbook for details.

Courses

Students complete three one-semester courses, two of which must be SA 850 or 870 and 857. The remaining course is chosen from SA 886, SA readings course, a course in another department or university. The option of the readings course and the extra-departmental course must be approved by the student’s supervisory committee and the departmental graduate program committee. Students with deficiencies might complete more courses.

Thesis

The thesis option focuses on high quality research study. The thesis 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. This will normally be done only to facilitate the inclusion of large appendices and tables. The thesis will be examined by the student’s supervisory committee and a qualified external examiner. Theses are bound and placed in the library.

PhD Program Requirements

Students complete four one-semester courses, two of which must be SA 850 or 870 and SA 857. If a doctoral student has completed an MA in the department, course requirements remain the same as for other doctoral students, but special arrangements will be made by the department’s graduate program committee so that SA 850 or 870 is not repeated. The remaining two courses will be chosen from SA 886, SA readings courses, or a course in another department or university. The optional readings and extra-departmental courses must be approved by the supervisory committee and the departmental graduate program committee. Students with deficiencies may be asked to complete more courses.

Students must also complete a written qualifying examination in theory and methodology. Prior to commencing work on the thesis, the student will defend a written prospectus on the thesis in an oral examination.

Students must prepare a thesis. See the department handbook for guidelines. An oral examination on the thesis is also required.

Graduate Seminar

All full-time graduate students must attend and actively participate in the graduate seminar during their first two program semesters. In subsequent semesters, attendance and registration is voluntary. Special arrangements will be made for part-time students to fulfill this requirement.

Language Requirement

Although a knowledge of French or foreign languages is desirable for advanced studies, there is no prescribed language requirements. However, where a language other than English is necessary for field work or reading, proficiency will be required.

Co-operative Education

This program enables students to gain work experience that complements their academic studies. MA students in good standing with a minimum 3.0 GPA may apply to co-op after satisfactory completion of SA 850 or 870, and SA 857 plus one (thesis option) or two (extended essay or research project option) of the following: SA 853, 854, 871, 872, 886, or equivalent. Recommendation of the supervisory committee and the approval of the departmental graduate program committee is required. Students may take the traditional co-op program of two separate work semesters, or the co-op internship of three consecutive work semesters. Work semester arrangements are made through the faculty’s Co-op Co-ordinator at least one semester in advance. See “Co-operative Education” on page 231.

Urban Studies Program

3274 Simon Fraser University Vancouver, 604.268.7914 Tel, 604.291.5297 Fax, urban@sfu.ca, www.sfu.ca/urban

Director
A. Perl AB (Harv), MA, PhD (Tor)

Assistant Professor
M. Holden BSc (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
M. Holden, Geography, Urban Studies
E. McCarr, Geography
G. Price, City Program
M. Roseland, Geography
P.J. Smith, Political Science
E.C.K. Stewart, Public Policy Program

Advisor
Ms. T. Evans BA (Manit), MA (S Fraser)

The city is a central feature of modern societies and economies, and the development of cities over the past 500 years has paralleled and led the evolution of the modern world. Academic interest in urban studies spans many disciplines and is focused on understanding what cities are, how they function, and change. Focused study provides perspectives on many of today’s social and economic problems.

The Urban Studies program provides an exciting opportunity to study the city and its functions from several perspectives. This professional program is for those whose work concerns cities (planners, researchers, consultants, analysts, members of NGOs) and those curious about planning, local politics, and urban development. The program provides a strong foundation in various urban related disciplines.
disciplines and emphasizes the application of these disciplines to real-world problems and situations. Courses are offered in the evenings at Simon Fraser University Vancouver, located in the core of British Columbia’s principal urban, national, and international centre. The program draws particularly on Vancouver’s experience but also encompasses study of cities in other places and from other times.

**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 guide students through the preparation of an original urban research project which demonstrates their 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**

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, 604.291.3333 Tel, 604.291.5518 Fax, www.sfu.ca/womens-studies

**Chair**

M.L. Stewart BA (Calg), MA, PhD (Col)

**Graduate Program Chair**

M. MacDonald, BEd (Qui), BSc (McAll), PhD (WOnt)

Ruth Wynn Woodward Endowed Chair

K. Braid BA (MAll), MA (S Fraser), MFA (Br Col)

**Faculty and Areas of Research**

See “Department of Women’s Studies” on page 184 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; literary 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 interdisciplinary work concerned with women.

**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. Matsumura, 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 co-operation 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.

**Department of Women’s Studies**

5102A Academic Quadrangle, 604.291.3333 Tel, 604.291.5518 Fax, www.sfu.ca/womens-studies

**Chair**

M.L. Stewart BA (Calg), MA, PhD (Col)

**Graduate Program Chair**

M. MacDonald, BEd (Qui), BSc (McAll), PhD (WOnt)

Ruth Wynn Woodward Endowed Chair

K. Braid BA (MAll), MA (S Fraser), MFA (Br Col)

**Faculty and Areas of Research**

See “Department of Women’s Studies” on page 184 for a complete list of faculty.

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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
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The master’s program in women’s studies is an interdisciplinary program and it is possible, therefore, for the master’s student, in co-operation 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.

**Graduate Program**

**Admission Requirements**

Applicants must satisfy the women’s studies graduate committee, to create an interdisciplinary program and it is possible, therefore, for the master’s student, in co-operation with the women’s studies graduate committee, to create an individualized program of studies to suit the student’s scholarly interests and goals.

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 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 work concerned 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 who has completed 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.

**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 giving evidence of independent research and critical abilities. An MA thesis is expected to be an in-depth empirical or theoretical study. The normal length of the thesis is 60-120 pages. Extended essays are defined as scholarly papers that meet the same standards of excellence as a thesis; they will be examined in the same way as a thesis, 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 241.

- 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 of ensuring that the student fulfils 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 fulfils 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 doctoral level work in women's studies. Normally, a master's degree will be 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 238), 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 242).

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

Graduate Programs

The Faculty of Business Administration offers four programs leading to the MBA degree: the executive MBA program, the global asset and wealth management, the specialist MBA program and the management of technology MBA program.

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) has been designed in close co-operation with representatives of the financial community. The result is a program that provides a high level of expertise in both the engineering and architectural aspects of investment management. Students will 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 specialized MBA program is a full-time program designed primarily for recent graduates who desire more concentrated exposure to a specific field of business study and development of applied research skills. Recent graduates with a business degree move directly to study an area of specialization.

The Management of Technology program (MOT) is designed 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 can enrol in either the accelerated option (full-time study for 12 months) or the flexible option (part-time study for 24 months).

The PhD in Business Administration aims to develop outstanding students in research and teaching in Business Administration 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 5K3 604.291.5013 Tel, 604.291.5122 Fax, www.sfubusiness.ca/gdba

Academic Director
M. Parent BComm (Car), MBA, PhD (Qu), 604.291.5214
Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 604.291.5023

The graduate diploma in business administration (GDBA) provides core business skills to those who have earned an undergraduate degree in a discipline other than business. Delivered online over three semesters, the GDBA is a convenient and practical alternative to attending a traditional classroom-based program. It provides students with business fundamentals that will improve their career prospects.

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 Simon Fraser University GDBA requires a strong command of the English language. Applications are processed as they are received. Early submission of all required materials will enable the admissions committee to assess the student’s file expeditiously.

Application

Candidates must submit the following documentation when applying to the program:

• 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 and/or their national language is other than English. The minimum University requirements for test scores are: IELTS (International English Language Testing System) with a minimum score of 7 on the Academic Modules; or 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 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 a total of 24 credit hours drawn from the following courses.

BUS 550-2 Financial Accounting
BUS 551-2 Managerial Accounting
BUS 552-2 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/Organizational Behavior
BUS 558-3 Special Topics
BUS 559-4 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.

Specialist MBA Program

Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 5K3 604.291.5259 Tel, 604.291.5153 Fax, mba@sfu.ca, www.sfubusiness.ca/mba

Academic Director
M. Parent BComm (Car), MBA, PhD (Qu), 604.291.5214

Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 604.291.5023

The program allows business practitioners to investigate their intended career field to develop in-depth expertise in one of three functional areas of management: international business, leadership and organizational change, or marketing.

Additional fields of specialization are available with the approval of the student’s supervisory committee. For example, students can take supporting courses in such disciplines as information systems, resources management, economics, computing science, criminology, and engineering science.

The one year cohort program begins in September, and programmed courses are sequenced through fall, spring, and summer semesters. The course load is three courses per semester with the project course undertaken in the third (final) semester.

Admission Requirements

an applicant must have an undergraduate degree in business administration or its equivalent from a recognized university, and should have completed course work in differential calculus, statistics, managerial economics (or micro economics), accounting, management science (or operations research), finance, marketing, human resource management, and business policy (or business and society). Those admitted without all of these courses may be required to make up the deficiency without graduate credit. The minimum undergraduate GPA required for admission is 3.0 (or equivalent).

Criteria for admission, in addition to undergraduate course work, include:

• minimum score on the graduate management admissions test (GMAT) of 550, and 5 on analytical writing

• strong reference letter

• at least two years of work experience

• for students whose native language is not English, acceptable TOEFL scores (570 minimum) and a score of 5 or above on the test of written English, a score of 7 or above on IELTS.

*Integral calculus is required for specializations in marketing.

Application

The maximum number of students admitted annually to each specialization is expected to be 30. Students must submit the following documentation when applying.

• Simon Fraser University graduate application form

• official transcript of undergraduate grades (mailed directly from the granting institution). Include an unofficial copy of your transcript(s) with your application.

• three confidential letters of reference (mailed directly to the referees), at least two of which should come from faculty members at universities.

• GMAT results

• Students whose first language is not English and whose undergraduate degrees have not been obtained in Canada, the United States, the United Kingdom, Australia or New Zealand where English is the language of instruction, require either their TOEFL scores and the test of written English, or their IELTS score.

• a passport style photograph

Financial Assistance

A number of entrance scholarships and graduate fellowships are available to students who demonstrate high academic performance. See “Financial Aid for Graduate Students” on page 248 for graduate scholarships and awards. The Faculty can also offer most qualified graduate students a teaching assistantship in business administration. Remuneration is normally $4,800 per semester. Also, members of faculty, from time to time, have funding available to hire research assistants.

Degree Requirements

To qualify for the MBA degree, the candidate must complete the requirements under one of two available options: project option or thesis option.

For the project option, students complete a minimum of three courses in a field of concentration, a minimum of one course in a supporting field, and one course in research techniques. Eight courses are required for the project option. Of these, four must be supporting or research courses. In addition, students must complete a written research project equivalent to one course.

A project will generally represent successful original research regarding some practical problem. While students are expected to conduct a literature search regarding the problem, it will generally be less exhaustive in comparison with that of the thesis. The scope of a project is regarded as equivalent to one six-credit hour graduate course.

For the thesis option, students complete a minimum of three courses in a field of concentration as well as at least one course in research techniques and BUS 900, Research Methodology. Six courses are required in the thesis option. In addition, students complete a written research thesis equivalent to three courses. In general, a thesis represents a major research effort in which the student, working closely with the supervisory committee, demonstrates a comprehensive knowledge of the discipline literature and successfully completes original research which represents a contribution to knowledge in the area.

The requirements and options for each of the areas are detailed below.

Fields of Concentration: three course minimum

Accounting

BUS 871-4 Seminar in Financial Accounting
BUS 872-4 Seminar in Managerial Accounting
BUS 874-4 Advanced Topics in Accounting

Finance

BUS 815-4 Portfolio Theory
BUS 817-4 Theory of Capital Markets
BUS 818-4 Advanced Topics in Business Finance

International Business

BUS 862-4 Contemporary Topics in International Business
BUS 882-4 Doing Business with the Pacific Rim Countries
BUS 883-4 International Business and Multinational Enterprises
BUS 884-4 Comparative Management
BUS 885-4 International Human Resource Management
BUS 886-4 Management of International Firms
BUS 887-4 Entry Strategies for International Markets
Management and Organization Studies
BUS 831-4 Industrial Relations
BUS 836-4 Human Resource Practices for managers
BUS 837-4 Effective Leadership and Management in Organization

BUS 839-4 Organizational Assessment and Planned Change

Marketing and Information Systems
BUS 822-4 Decision Theory
BUS 876-4 Decision Support Systems
BUS 845-4 Marketing Measurement
BUS 846-4 Mining and Models in Marketing
BUS 877-4 Managing Information Technology
BUS 878-4 Electronic Commerce

Marketing
BUS 845-4 Marketing Measurement
BUS 846-4 Marketing Theory and Models
BUS 847-4 Advanced Consumer Behavior
BUS 848-4 Research in Marketing Strategy

Policy Analysis
BUS 850-4 Theoretical Issues in Strategic Management
BUS 852-4 Researching the Corporation in Canadian Society
BUS 854-4 Business and Government Regulation
BUS 858-4 Business and the Public Interest
BUS 860-4 Administration of Public Enterprises

Supporting Courses

The academic supervisor, in consultation with the student, selects supporting courses, either from business administration or from other fields of study (e.g., economics, resource management, computing science, psychology).

Research Courses

Project option students take at least one course in research techniques (BUS 801 or equivalent). Thesis option students take BUS 900 in addition to a minimum of one course in research techniques. The academic supervisor, in consultation with the student, selects research courses. Students taking BUS 900 should complete their other research courses first.

Co-operative Education

This option is available to qualified MBA students at the Burnaby campus. The goal of the co-op...
component is to give students applied experience so that they can link concepts with practice, and advance their career opportunities.

**Admission Requirements**

Students must be admitted to the MBA program before applying for the co-op option and must have a CGPA of at least 3.0. Students must maintain these grade levels to the start of the first semester. All students must demonstrate proficiency in English, with an overall score of 88 or better with a minimum score of 20 in each of the four components (listening, speaking, reading, writing). TOEFL iBT (Test of English as a Foreign Language computer based test) with a minimum score of 230 including a minimum essay score of 5.

**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 248 for information on university scholarships and awards that are available to graduate students.

**Executive MBA Program**

Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 5G3, 604.291.5013 Tel, 604.291.5122 Fax, emba_program@sfu.ca, www.sfubusiness.ca/emba

**Academic Chair**
C. F. Smart BComm, MBA, PhD (Br Coll), 604.291.5227

**Executive Director**
D. Cross BA (Qu), MHA (Ott), CHE, 604.291.5023

The program is designed 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 leadership skills, strategic analysis, and change management within a global business context.

The program utilizes a cohort model where students take 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 Simon Fraser University Vancouver. The program begins in September and students complete the course work in two years.

**Admission Requirements**

Applicants will be considered for admission to the program 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 use of Excel applications. Analytical Review workshop is offered during the summer prior to the start of the first semester.

• 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 grade point average) and complete 12 core courses and a minimum of one elective from the following list.

**BUS Courses**

- 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 605-4 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 616-4 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
- 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 688-4 Industrial Relations
- BUS 689-4 Special Topics in Business Administration
- BUS 691-4 Business and Government
- BUS 696-6 Applied Project
- BUS 698-4 Directed Studies in Business Administration

Students may substitute, with the prior consent of the executive MBA graduate program committee, 600 division BUS courses listed above with equivalent course work from another Simon Fraser University graduate program.

**Courses Offered by the Program**

The following BUS courses are offered for the Executive MBA Program:

**MBA (Global Asset and Wealth Management)**

Segal Graduate School of Business, 500 Granville Street, Vancouver, BC, V6B 5G3 604.268.7921 Tel, 604.291.5153 Fax, www.sfubusiness.ca/gawm

**Academic Chair**
P. Klein BSc, MBA (WOnt), PhD (Tor)

**Executive Director**
D. Cross BA (Qu), MHA (Ott), CHE, 604.291.5023

The Global Asset and Wealth Management Program (GAWM) was designed with the co-operation of the financial community resulting in a program that provides a high level of 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 registered in the full time GAWM program.

**Admission Requirements**

For admission, applicants must have an undergraduate degree in business, commerce, economics, a professional designation such as a CFA, or successful completion of the Graduate Diploma in Business Administration (GDBA) offered by Simon Fraser University. In addition to the academic requirement, applicants to the program will be considered based on the following criteria:
- two to three 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

The application deadline for full time students is April 30.

**Application**

Students must submit the following documentation when applying for the GAWM 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. Applicants must take the test of English as a Foreign Language (TOEFL) if their first language is not English and/or their national language is other than English. The minimum University requirements for test scores is: IELTS (International English Language Testing System) with a minimum score of 7 on the Academic Modules; or TOEFL IBT (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

**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 248 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 totaling 40 credit hours or more from the following list:
- BUS 802-4 Foundations of Financial Economics
- BUS 803-4 Financial Econometrics
- BUS 804-4 Strategic Analysis For Wealth Management
- BUS 805-4 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 809-2 Equity Security Analysis and Portfolio Management
- BUS 810-2 Fixed Income Security Analysis and Portfolio Management
- BUS 811-2 International Investing and Portfolio Management
- BUS 812-2 Tax and Estate Planning
- BUS 813-2 Ethics, Wealth Management and the Securities Industry
- BUS 814-2 Derivative Securities
- BUS 816-2 Investment Policy
- BUS 819-4 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 5K3 604.291.5259 Tel, 604.291.5153 Fax, mba@sfu.ca, www.sfubusiness.ca/mba/mot/

Academic Director
M. Parent BComm (Car), MBA, PhD (Qu), 604.291.5214

Executive Director
D. Cross BA (Qu), MHA (Ott), CHE, 604.291.5023

This program addresses high technology business sector needs and continues Simon Fraser University’s long tradition of industry collaboration. MOT MBA graduates will have a solid grounding in the theories and disciplines of management, particularly focused on topics relevant to an organization with technical core competencies. MOT MBA students work, or want to work, in enterprises that have products or services based on advanced technology. Most will have an undergraduate degree in a technical discipline; some will have an undergraduate business degree complemented with technical work experience.

The program consists of three full time semesters including an industry-based final project. Students who continue working while they complete the program have the option of completing the program over six semesters.

Admission Requirements
For admission, applicants to the MOT MBA must have either an undergraduate degree in business (BBA, BCom); or a non-business undergraduate degree combined with the graduate diploma in Business (GDBA); or a non-business undergraduate degree combined with an approved program of business courses. In addition to the academic requirements, applicants to the program will be considered based on the following criteria:
- a minimum of two years of relevant work experience
- graduate management admission test (GMAT) test results
- three letters of reference from colleagues, supervisors or significant clients

The application deadline is April 30. However, late applicants who meet all the program prerequisites may be considered for admission at the discretion of the program chair.

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 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 and/or their national language is other than English. The minimum University requirements for test scores is: IELTS (International English Language Testing System) with a minimum score of 7 on the Academic Modules; or 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 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

Financial Assistance
An entrance scholarship annually in the amount of $10,000 will be awarded from funds donated by the MOT Business Council. See “Financial Assistance and Awards” on page 42 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 totaling 36 credit hours or more from the following list:
- BUS 750-4 Managing Technological Innovation
- BUS 752-4 Strategic Management of Technology-based Firms
- BUS 754-4 Marketing Technology-based Products and Services
- BUS 756-4 Strategic Use of Information and Knowledge
- BUS 758-4 Supply Chain Management
- 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 764-2 Financial and Economic Organization
- BUS 766-2 Organizational Focus, and Control through Financial Management
- BUS 774-4 Special Topics* (to be determined by the program chair)
- 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

Courses Offered by the Program
The following BUS courses are offered for the Management of Technology program: BUS 750, 752, 754, 756, 758, 759, 761, 762, 763, 764, 766, 770, 771, 772, 773, 774, 776, 777, 780.

PhD Program
5300 West Mall Centre, 604.291.5553 Tel, 604.291.5833 Fax, www.sfu.ca/grad

Academic Director
C. Veld MFE, PhD, PhD (Tilburg), 3361 West Mall Centre, 604.298.8790 Tel

As part of a small cohort, students will benefit from the opportunity to share the experience with others studying in various areas of business through a small number of common core courses. In addition, students will undertake a program of study in their area of specialization and research methods that is tailored to the needs and interests of individual students and the research strengths of the faculty. It also contains a teaching development component involving a certificate program for graduate students in university learning and teaching for students without substantial teaching experience or experienced teachers who wish to upgrade their skills.

Admission Requirements
The minimum university requirements for doctoral program admission are provided in "1.3.4 Admission to a Doctoral Program" on page 238 of the Graduate General Regulations.

New students will be admitted for the fall semester only. A minimum score on the graduate management admissions test (GMAT) of 600 and on analytical writing is required.

In addition, fit between applicants’ interests and available faculty supervisors will be considered before a student is admitted to the program. Interviews and a statement of interest in the application will be used to determine fit between students and faculty.

Application
Students must submit the following documentation 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 Supplemental Information 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 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) 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 for test scores 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 will combine 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 will typically take 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. There will be a required research project with a pass/fail grade in the student’s third semester and the dissertation. The PhD candidate will be expected to fulfill the university qualifications with regard to a thesis and its public defense.

Those students 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 980-4 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 senior 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 available at Simon Fraser University are as follows.
ECON 835-4 Econometrics
ECON 836-4 Applied Econometrics

ECON 837-4 Econometric Theory I
ECON 838-4 Econometrics Theory IIA
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 courses will be taken in the first five semesters. The PhD 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 to be set and administered by the senior supervisor in consultation with the student’s PhD committee and the director of the PhD program. 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 senior supervisor. In special cases, the senior 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 being admitted to the PhD program. 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 Semester Project (Summer Project)
PHD students will generate a research project in their third semester. The research project will be graded by the senior supervisor. A pass/fail assessment is intended to help the student in developing 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 be required to present it in the open research presentations (see above). It is hoped that the questions and answers emerging in this context will assist the student in developing their understanding of and preparation for the thesis defense.

Candidacy Exam
At the end of the second year, term six, the PhD candidate will present an oral defence of their thesis proposal. In this context, the PhD director will assign a faculty member who is external to the PhD candidate’s committee, but within the Faculty of Business Administration, to join in the examination. The examination 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. Suggestions by the evaluators about how to improve and clarify the research proposal are expected. Those who fail the candidacy exam must retake it and pass by the end of the eighth semester or they will be asked to withdraw from the program.

No PhD candidate, unless given special permission, will be allowed to take a candidacy exam after the eighth semester.

Thesis/Thesis Defence
Following “1.9 Preparation for Examinations” on page 241 of the Graduate General Regulations, the PhD thesis in Business Administration will focus upon original research. The thesis can take the form of one long narrative/empirical work or a series of papers.

Residence Requirement
A PhD candidate must be registered and in residence at Simon Fraser University for a minimum of five semesters. See “1.7.3 Residence Requirement for the Doctoral Degree” on page 241 of the Graduate General Regulations.

Teaching Option
Faculty of Business Administration PhD students who do not have substantial teaching experience will have the option of completing 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 at Simon Fraser University. This program will enhance and develop teaching skills. The practicum component will involve developing and delivering an undergraduate course in the Faculty of Business Administration.
Faculty of Education

C. Dehler – on-line and distance teaching and learning environments; educational technology integration; diffusion of innovation; computer-mediated communication; computer-supported collaborative learning; collective knowledge building; distributed cognition; organizational learning; professional development and performance efficacy; teacher education

K. Egan – 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; instructional theories and practices for the elementary classroom; ecological education; Aboriginal education; Esperanto and education; imagination in teaching and learning; critical and transformative approaches to educational administration

M.R. Hawkins – ESL, literacy studies; bilingual education; teacher education, sociolinguistics

C. Wheeler – ESOL teacher; counselling families; therapeutic relationships; cognitive-attributional processes

M.J. Hoskyn – language, memory and learning; cognitive-attributional processes

M. MacDonald – early childhood education; language development; language learning; code-switching; bilingualism and plurilingualism; pluriliteracy; bilingual education

D. Neufeld – English as a second language teaching and learning; code-switching; bilingual education; French as a second language

N. Popadiuk – qualitative research examining international student adjustment and intimate relationships; teacher education, suicide counselling, the self-confrontation interview in clinical settings

S. Richardson – arts education; aesthetics and arts theory; philosophical and social foundations of education; globalization; arts-based research; photography; teacher education

E. Samier – philosophy of administration and leadership; international comparative educational administration; Weberian studies; organizational culture and aesthetics; epistemological foundations of related to market-based education reform efforts; the impact of high stakes accountability and assessment programs on educational systems

P. Lijedahl – instances of creativity, insight, and discovery in mathematics; mathematics and affect; teaching and learning of elementary number theory; imagination and mathematics; instructional design; mathematical problem solving and numeracy; teacher education and professional growth

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 science education; epistemology of science education and role of practicum experiences in teacher development

G. Madoc-Jones – language arts; hermeneutics; philosophy of education; poetry; history of literacy; BC literature

C.M. Mamchur – languages 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 post-service); professional development for the secondary English teacher; learning styles of the gifted; evaluation practices in secondary English classrooms; predicting teacher effectiveness; writing process; integrated secondary education

J. Martin – theory and history of educational psychology; applied social, developmental psychology in education; selfhood, personhood, and education

D. Neufeld – applied linguistics, sociolinguistics, bilingualism and plurilingualism; pluriliteracy; immigration; language acquisition and second language learning; code-switching; bilingual education; French as a second language

R. Barrow – philosophy of education; moral philosophy of education; creativity; critical thinking

H. Bai – philosophy of education; humanities; social, moral philosophy; epistemology; ecology; cross-cultural education; Asian philosophies; Zen arts

D. Laitsch – the use and misuse of research in education; impact of early adversity in family and school contexts; early childhood collaboration, transformational leadership, shared communities, staff collaboration, school-university policy, teacher education; schools as learning communities; predicting teacher effectiveness; writing process; integrated secondary education

S.C. de Castell – Educational media studies, non-formal learning environments, cultural studies and critical theory; multi-modal, study of emerging methods of models of educational communications, education, gaming and gender

S.Blenkinsop – philosophy of education; imagination

M.R. Hawkins – ESL, literacy studies; bilingual education; teacher education, sociolinguistics

M.J. Hoskyn – language, memory and learning; cognitive-attributional processes

M. MacDonald – early childhood education; language development; language learning; code-switching; bilingualism and plurilingualism; pluriliteracy; bilingual education

D. Neufeld – English as a second-language reading; the social construction of disability and risk; the prevention, evaluation, and remediation of reading disabilities; and early English literacy development in English language learner classrooms

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; involvement in History and Science; disciplinary genres of writing and measures of genre appropriation; non-invasive strategies for classroom research

D. Paterson – school counselling; developmental counselling; counselling in the elementary school; school-based support teams; counselling in groups

J. Martin – theory and history of educational psychology; applied social, developmental psychology in education; selfhood, personhood, and education

D. Neufeld – applied linguistics, sociolinguistics, bilingualism and plurilingualism; pluriliteracy; immigration; language acquisition and second language learning; code-switching; bilingual education; French as a second language

N. Popadiuk – qualitative research examining international student adjustment and intimate relationships; school counselling, suicide counselling, the self-confrontation interview in clinical settings

S. Richardson – arts education; aesthetics and arts theory; philosophical and social foundations of education; globalization; arts-based research; photography; teacher education

E. Samier – philosophy of administration and leadership; international comparative educational administration; Weberian studies; organizational culture and aesthetics; epistemological foundations of related to market-based education reform efforts; the impact of high stakes accountability and assessment programs on educational systems

P. Lijedahl – instances of creativity, insight, and discovery in mathematics; mathematics and affect; teaching and learning of elementary number theory; imagination and mathematics; instructional design; mathematical problem solving and numeracy; teacher education and professional growth

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 science education; epistemology of science education and role of practicum experiences in teacher development

G. Madoc-Jones – language arts; hermeneutics; philosophy of education; poetry; history of literacy; BC literature

C.M. Mamchur – languages 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 post-service); professional development for the secondary English teacher; learning styles of the gifted; evaluation practices in secondary English classrooms; predicting teacher effectiveness; writing process; integrated secondary education

J. Martin – theory and history of educational psychology; applied social, developmental psychology in education; selfhood, personhood, and education

D. Neufeld – applied linguistics, sociolinguistics, bilingualism and plurilingualism; pluriliteracy; immigration; language acquisition and second language learning; code-switching; bilingual education; French as a second language
Graduate Programs

8655 Education Building, 604.291.4787 Tel, 604.291.4320 Fax, www.educ.sfu.ca/gradprogs

Graduate Program Director
T.J. O'Shea BEdG (McG), EdS (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 two programs, 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 MEd programs that include 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 896 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 237 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.

Applications for master’s and doctoral programs in education 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 doctoral 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 and to a particular program or specialization.

Admission decisions are available between March 15 and 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 PhD Program Information
604.291.4787 Tel, 604.291.4320 Fax, educgdpg@sfu.ca

MEd Off Campus and EdD Program Information
604.291.5897 Tel, 604.291.4320 Fax, dpruner@sfu.ca

Web Information
www.educ.sfu.ca/gradprogs

Supervision

A pro-tem advisor will be appointed by the director of graduate programs upon admission. The pro-tem advisor 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 on supervisory committees, refer to “1.6 Supervision” on page 240 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 and the Educational Psychology program, culminate with a comprehensive exam (EDUC 883). In an Individual program and the Educational Psychology program, a project (EDUC 891) is undertaken that materially and substantially relates theory to practice or that examines a significant education problem.

MEd Off Campus Programs

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 local interests and professional practice needs. During fall and spring semesters, classes normally are scheduled every second weekend in the community where the program is offered. In the summer semesters, students typically attend classes on the Simon Fraser University 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: 604.291.5951.

MEd Off Campus 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 five-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, 604.291.4892/5830 Tel.

**Residence Requirements**

See “1.7 Residence and Course Requirements” on page 240.

**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 240.

**MEd Comprehensive Examinations**

All MEd candidates, except those in an Individual program and the Educational Psychology program, must take a comprehensive examination by enrolling in EDUC 883. Normally, this occurs in the semester in which course requirements are completed or in the immediately following semester. Students are advised to observe deadlines for adding courses in planning the semester in which they enrol in EDUC 883.

**MEd Project**

This option is available to students in an Individual or Educational Psychology program.

**MA and MSc Thesis**

Normally, before the fifth program course, the student presents a master’s thesis research plan to the pro-tempor advisor or a 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 241 and "1.10 Examinations" on page 242).

**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 care required to complete all of

**Core Courses**

EDUC 843-5 Embodiment and Curriculum Inquiry
EDUC 848-5 Ideas and Issues in Aesthetic Education
EDUC 849-5 Artists, Society and Arts Education
EDUC 850-5 Creativity and Education
EDUC 852-5 Education and Dramatic Art
EDUC 866-5 Curriculum Theory and Art Education
EDUC 869-5 Music Education as Thinking in Sound

All students enter the program through the MEd route. Students may move to the MA after completing four courses, given faculty approval. MA students must complete five courses from the list below, as scheduled. These are a minimum. 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 a MA, MA, and 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 35 hours of course work and a thesis. MA students are required to complete all of

**MA Core Courses**

EDUC 801-5 Counselling Practicum I
EDUC 802-5 Counselling Practicum II
EDUC 862-4 Individual Assessment Procedures
EDUC 870-5 Theories of Counselling
EDUC 874-5 Counselling Skills and Strategies
EDUC 889-10 Masters Thesis

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 Quantitative Methods in Educational Research

Counselling MA research courses are offered in the late afternoon/early evening and during the day in summer session. The program is grounded both in research and in practice, and it has a strong philosophical and conceptual orientation. All these features, reflected in the program and in each course, 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 of

**Core Courses**

EDUC 801-5 Counselling Practicum I
EDUC 802-5 Counselling Practicum II
EDUC 862-4 Individual Assessment Procedures
EDUC 864-5 Research Designs in Education
EDUC 870-5 Theories of Counselling
EDUC 874-5 Counselling Skills and Strategies
EDUC 877-5 Contemporary School Counselling
EDUC 883-5 MEd Comprehensive Examination

In addition, MA students must complete a minimum of two elective courses selected 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 the completion of the course work and supervised field experiences. The examination will be set by the faculty members associated with the program, in association with the director, and will cover two areas: ethics and professional practice.

**MA/MEd Electives**

A course may not count as a core and an elective. Acceptable courses may include the following.

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 828-5 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 871-5 Family Counselling
EDUC 873-4 Vocational Counselling
EDUC 876-5 Cognitive Intervention Research
EDUC 878-5 Group Counselling

**Course Requirements**

EDUC 813-5 Organizational Theory and Analyses
EDUC 815-5 Administrative Processes
EDUC 817-5 Policy Processes
EDUC 818-5 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.
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plus two additional courses (10 credit hours) approved by the co-ordinator.
EDUC 883-5 MEd Comprehensive Examination fulfills one of the following: course work requirements. It is held once a year, during summer session.
MA Requirements Students admitted to the MEd program may, on the advice of their senior supervisor, transfer into the MA program. The MA program requires the completion of four core courses above plus EDUC 864-5 Research Designs in Education. Students must demonstrate appropriate research competence which may necessitate taking one additional course.
Students may also take one or more electives as required or approved by the senior supervisor.
EDUC 898 Master's Thesis (10 credit hours) follows completion of course work requirements.

Educational Practice
This three-year program, leading to the MEd (course work/comprehensive exam) degree, focuses on Educational Practice and builds on the work of the Graduate Diploma in Advanced Educational Studies. It is available only to students who are enrolled in the Graduate Diploma offered by the Field Programs of the Faculty of Education. This program is designed for students in the second year of the two-year program. It may be applied to the 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 course work and a comprehensive exam.

Core Courses
Contact Field Programs: 604.291.4892 Tel, 604.291.5882 Fax, fpa@sfu.ca

Educational Psychology
This program leads to the MA or MEd degree (Comprehensive Examination or Project). Through studies of theories and applied 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 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

Development Stream Required Courses
EDUC 805-5 Social Development in the School Context EDUC 842-5 Sociocultural Perspectives on the Psychology of Development and Education

Exceptional Stream Required Courses
EDUC 829-5 Contemporary Issues in Learning Disabilities
EDUC 876-5 Cognitive Intervention Research
Reading Stream Required 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 registration.

MA Degree Requirements
Students must complete:• core courses (eight credits)• courses in a stream (10 credits)• two electives chosen from courses within the Educational Psychology program (10 credits)• one of EDUC 863-5 Qualitative Methods in Educational Research EDUC 867-5 Qualitative Methods in Educational Research

MEd Degree (Project) Requirements
Students must complete:• core courses (eight credits)• courses in a stream (10 credits)• three electives chosen from courses within the Educational Psychology program (15 credits), and• EDUC 881-5 Project

MEd Degree (Comprehensive Examination) Requirements
Students must complete:• core courses (eight credits)• courses from any three streams (30 credit hours)• at least one elective course within the Educational Psychology program (5 credit hours), and• EDUC 883-5 MEd Comprehensive Examination

Educational Technology and Learning Design
This program leads to the MA (thesis) or MEd degree (comprehensive examination). It is intended to develop professionals who can take a scholarly approach to the design of learning technologies, plans for its use, and formal evaluations of technology-based innovations for learning. Designed to accommodate students who are employed full time during the day or who take leave from work to study full-time, the program supports diverse cohorts including professionals from a variety of fields including K-12 teachers, college instructors, instructional designers, and aspiring academics. Applicants are welcomed from a wide variety of educational and technical backgrounds. Depending upon the course work on their transcripts, students may be admitted conditionally upon completing prerequisite courses in the Faculty of Education. Students are required to complete all of the following.

Core Courses

MA Requirements
Students pursuing a Master of Arts 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 degree must 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 faculty of a master's program 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 inquiry to be pursued for the master's project or thesis• courses proposed and their sequence (Plan of Study and Research)• a rationale for how the proposed courses contribute toward the master's project or thesis• the program may 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 normally 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 a reasonable time.

Secondary Mathematics Education
This cohort program, leading to the MSc (thesis) or MEd (course work/comprehensive exam) 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 exam. Students will select a degree option in consultation with faculty members.

Students are required to complete all of the following:

Core Courses

Electives
The remaining courses are selected from graduate level courses in the Faculty of Education or in the Department of Mathematics and Statistics.

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 language learners in public schools. It will also appeal to teachers of 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 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 select 3 of the following courses.
- EDUC 711-5 Special Topics: Anti-Racist Pedagogies
- EDUC 720-5 Special Topics: Vygotksian 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 original research projects. 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 240.

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 semester in which course requirements are completed or the semester immediately following.

EdD and PhD Thesis

Normally, before the fourth program course, a doctoral thesis research plan is presented to the pro-tempor advisor or a 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 member of the University faculty chosen in consultation with the senior supervisor, the supervisory committee is formed and the student proceeds to the thesis. The completed thesis will be examined as in Graduate General Regulations "1.9 Preparation for Examinations" on page 241 and "1.10 Examinations" on page 242.

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 Educational Theory

- EDUC 901-5 Seminar in the History of Educational Theory
- EDUC 902-5 Interdisciplinary Seminar in Contemporary Educational Theory

Arts Core

- EDUC 945-5 Doctoral Seminar in Arts Education

Curriculum Specialization

- EDUC 910-5 Directed Readings
- EDUC 983-5 Doctoral Comprehensive Examination

Courses in research methodology may be required depending upon the student's research interests.

Curriculum Theory and Implementation

This program leads to the PhD degree. It requires successful completion of the following course work, amounting to a total of 20 credit hours beyond the requirements for the MA, MSc or MEd.

Students are required to complete all of 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

Courses in research methodology may be required further work in the Faculty of Education or other faculties. Students are encouraged to draw additional courses from related departments outside the Faculty of Education.

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 911-5 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

plus one elective graduate course as approved by the supervisor and co-ordinator of the program.

Educational Leadership

This program, leading to an EdD degree, is for educational administrators who work full time so classes are held on extended weekends and during the summer. This degree looks beyond educational leadership as the application of generic management techniques. It prepares leaders for situations where technique is insufficient and prepares educational leaders to deal with currently pressing issues and to understand deeper ethical, political, socio-cultural, technological, and educational matters.

Students are required to complete all of EDUC 950-5 Approaches to Educational Research

- EDUC 960-5 Ethics, Law and Professional Leadership
- EDUC 991-5 Educational Governance, Reform and Diversity
- EDUC 992-5 Organizational Leadership, Accountability, and the Public Interest
- EDUC 994-5 Seminar in Educational Theory
- EDUC 983-5 Doctoral Comprehensive Examination
- EDUC 899-10 Doctoral Thesis

EdD Program Information

604.291.5897 Tel, 604.291.4320 Fax, www.educ.sfu.ca/gradprog

Program in French

www.sfu.ca/baff-offa/educfr

Educational Psychology

This PhD program addresses theories, basic and applied research, and research methods in educational psychology. The program does not prepare students for BC College of Psychologists registration. Students may apply for transfer credit if the course is deemed acceptable to the degree. Exact transfer credit equivalency is not required, providing the courses are assessed as such. Admitted students must satisfy all requirements for the MA program in Educational Psychology. If EDUC 975 was taken in the MA program, it is waived from the core.

Core Requirements

EDUC 840-0 Graduate Seminar

EDUC 970-4 Systems and Paradigms in Educational Psychology

EDUC 971-4 Advanced Topics in Educational Psychology

EDUC 975-4 Advanced Quantitative Methods in Educational Research

Electives

Students select at least two additional graduate courses totalling a minimum of eight credits. Elective courses must be approved by the pro-tempor advisor or senior supervisor prior to registration.

OLY 983-5 Doctoral Comprehensive Examination

EDUC 899-10 Doctoral Thesis

Education Technology and Learning Design

This program develops broad-minded and highly qualified educational technology researchers and designers who may serve in academia, research and development labs, corporations, school boards or other settings. Organized in close conjunction with the Master in Educational Technology and Learning Design program, the PhD program emphasizes an apprenticeship of learning in which students work closely with faculty on leading edge of research.

Admitted students satisfy all requirements for the Master in Educational Technology and Learning Design. Applicants are welcomed from a variety of educational and technical backgrounds, although they may be required to take courses from the MA program before beginning coursework on the PhD. Students are required to complete all of Core Courses

EDUC 866-5 Advanced Qualitative Methods in Education Research

EDUC 899-10 Doctoral Thesis

EDUC 901-5 Seminar in the History of Educational Theory

EDUC 902-5 Interdisciplinary Seminar in Contemporary Educational Thought

EDUC 975-5 Advanced Quantitative Methods in Educational Research

EDUC 983-5 Doctoral Comprehensive Examination

plus two additional courses offered by faculty who are affiliated with the program. Students must also participate in the Educational Technology Program Institute (no credit).
Most students should also take a directed readings course (EDUC 910) with their senior supervisors prior to the comprehensive examination. The student’s supervisory committee may require the student to complete further work in the Faculty of Education or other faculties. Students are encouraged to draw additional courses from related units outside of the Faculty of Education.

Field Programs

8550 Education Building, 604.291.4892/5830 Tel, 604.291.5882 Fax, www.educ.sfu.ca/fp, fpa@sfu.ca

Director
A.M. MacKinnon, BSc, BEd, MSc (Calg), EdD (Br Col)

Graduate Diploma Offered
Advanced Professional Studies in Education

The Graduate Diploma in Advanced Studies in Education is laddered to the Master of Education program in Educational Practice. See “Educational Practice” on page 308 for details.

Graduate Diploma in Advanced Professional Studies in Education

This diploma program, administered through the Field Programs office, consists of a minimum of 30 credit hours in 500 level EDPR courses. (The total number of credit hours may vary, depending on the program content but will, in no case, be less than 30 credit hours of 500 level 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 portions of the program may be supported via the Internet. Students who are unable to follow a cohort through an entire theme-based program must complete a total of 30 credit hours, at least 18 of which must be in the given theme.

Admission to Diploma Program

The minimum requirements for admission are
• 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 but having a bachelor’s degree and significant teaching or leadership experience in education (e.g. in a pre-school or post secondary setting) may be accepted into the program.
M. Ester, Computing Science
D. Finegood, Kinesiology
J. Graham, Statistics and Actuarial Sciences
G. Gutman, Gerontology
N. Hauenerland, Biological Sciences
M. Howlett, Political Science
J. Hu, Statistics and Actuarial Sciences
G. Iarocci, Psychology
D. Kaufman, Education
S. Lear, Kinesiology
L. Lemare, Education
R. Lockhart, Statistics and Actuarial Sciences
C. Lowenberger, Biological Sciences
C. MacKenzie, Kinesiology
S. MacLean, Political Science
B. McNeney, Statistics and Actuarial Sciences
N. Olewiler, Economics
A. Parameswaran, 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

Graduate Degree Offered: Master of Science

New faculty members have been appointed with experience in multidisciplinary approaches to health using a wide range of methodologicals. Their expertise provides links to current research and teaching programs by complementing existing faculty with health interests in other departments.

Faculty of Health Sciences research and teaching programs share the defining features of integrating social and natural sciences approaches to determinants of individual and population health, health promotion and risk mitigation, and health informatics and technologies. This integration combines a broad spectrum of research approaches, methods of inquiry, levels of analysis, and research perspectives.

Interdepartmental graduate degrees are available by special arrangements. See "1.3.5 Admission Under Special Arrangements" on page 238.

MSc in Population and Public Health

Those completing the program will have well-developed skills in health promotion, disease prevention, determinants of health, and understanding of the complex interplay among types and levels of societal investment in health, along with the resulting trade-offs and implications for development of public policy. The program emphasizes strong research, methodological, communication, and computational skills.

Applicants with significant relevant work experience, and seeking professional or practitioner positions of leadership in health, will normally be advised to take the thesis stream. Graduates from this stream will have theoretical and practical concepts of population health, determinants of health, epidemiology, health promotion, health economics, global health, individual and population health-relevant behavior, and principles of public health. Skills will be learned in the context in which they are applicable, through emphasis on workplace-integrated study, problem-based learning, team-approaches to case studies, and seminars. The practicum provides workplace experience in population and public health.

Applicants seeking a research career, or those seeking a PhD degree will be advised to take the thesis stream. Graduates from this stream will have demonstrated competence at research, having completed a thesis and having gained relevant research skills in their course work.

Admission

Applicants who are recent graduates should have completed a baccalaureate degree in a discipline related to health, policy analysis, epidemiology, or systems of information technology. A cumulative grade point average of at least 3.3 is normally required. Applicants with substantial experience as practitioners in health or a related field will be evaluated in part on their academic credentials and in part on their career accomplishments. Applicants may receive conditional admission, subject to satisfactory completion of additional specified courses. Applicants should have successfully completed a university-level undergraduate course in statistics or equivalent.

A student whose first language is not English and whose undergraduate degree was from an institution where English is not the language of instruction is required to submit evidence of English language competence as described in section 1.3.12 of the Graduate General Regulations.

Degree Requirements

There are two streams within the MSc in Population and Public Health: a practicum stream and a thesis stream. Both streams meet international accreditation standards for masters degrees in public health. A minimum of 43 credit hours is thus required of students regardless of whether they complete the practicum or thesis stream. Thesis students receive six credit hours for the thesis. Practicum students receive three credit hours for their practicum experience and report. They complete one more elective course than students who complete the thesis stream. Normally it will not be possible to switch between streams after the first week of the second semester in the program.

Practicum Stream

Students must

• complete a practicum, consisting of one semester full-time as an intern in a workplace appropriate to the degree. The practicum's purpose is to develop skills related to health sciences, population health, or workplace health policy, and its assessment, enhancement, and innovation. A supervisory committee must be approved by the graduate program committee prior to the start of each practicum. The supervisory committee will assist the student in developing a practicum plan which must be approved before the start of the practicum semester. The Faculty's practicum co-ordinator will help organize practica placements. The senior supervisors will include a Faculty of Health Sciences faculty member or associate, and one other committee member. The practicum work term is normally completed in the summer semester.

• a report on the practicum must be prepared and defended as described under Projects under the Graduate General Regulations 1.9 and 1.10.

• complete a minimum of 43 credit hours that are selected in consultation with the supervisor.
committee, including the core courses HSCI 801, 802, 803, PPH 821, 822, 823, GLOH 660, 670, the practicum and practicum report HSCI 896, 897 (three credit hours), and elective courses (12 credit hours). With graduate program committee approval, electives may be chosen from graduate courses in other academic units across the university.

- the zero credit seminar, HSCI 691 (graded satisfactory/unsatisfactory) must be taken in each semester of study in the program other than the practicum (summer) semester.

**Thesis Stream**

Students must:

- complete and successfully defend a thesis (six credit hours)
- complete a minimum of 37 more credit hours including the core courses (28 credit hours) HSCI 801, 802, 803, PPH 821, 822, 823, GLOH 660, 670, and elective courses (nine credit hours). With approval from the graduate program committee, electives may be chosen from graduate courses in other academic units across the university.
- complete a zero credit seminar, HSCI 691 (graded satisfactory/unsatisfactory), in each semester of the program other than summer semesters.

**Core and Required Courses**

(28 credit hours)

GLOH 660-3 Environmental and Occupational Health
GLOH 670-3 Disease Prevention and Control
HSCI 691-0 Seminar in Health Science
HSCI 801-4 Biostatistics I
HSCI 802-4 Principles of Epidemiology for Public Health
HSCI 803-5 Research Methodology for the Health Sciences
PPH 821-3 Concepts and Principles of Population and Public Health
PPH 822-3 Social and Behavioral Contexts of Health and Disease
PPH 823-3 Analysis of Health Care Delivery Systems

Suggestions for possible electives may be obtained from the Faculty of Health Sciences.

**Graduate Diploma in Health Studies**

This professional diploma provides the foundations for methodology that are in contemporary use in community, population and global health. It is aimed at graduates with a background in some aspect of health, or in a discipline with applications in health systems, health policy, or global health, or at those who would simply like to learn more about this field. The program is intended to update prerequisite skills for graduate studies in these areas. It will emphasize current methodology for evidence-based inference: epidemiology, numerical analysis, modeling and management of uncertainties and risks. The methodology will be presented in the context of their applications in real world situations.

Diploma graduates will have the skills, methodology, attitudes and confidence to enter graduate programs in global health and to be full participants in academic endeavors that require the research methodology of community, population, and global health. International students are especially welcomed into the program.

**Application and Admission**

Applicants will normally hold an undergraduate degree in health, natural or applied sciences, social, business, or management studies, with a minimum 2.5 cumulative grade point average. Applications from students with other qualifications or with equivalent professional training and experience will also be considered.

Applicants must submit the following documentation to the Faculty’s graduate secretary:

- application for graduate admission, available from the Office of the Dean of Graduate Studies’ website 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
- and for applicants whose first language is not English, please see “1.3.12 English Language Competence” on page 238 for English language requirements.

**Transferable Credit**

Directly equivalent courses can be accepted for transfer credit, sometimes with the need to challenge the Simon Fraser University course by examination. The decision about whether a course meets articulation requirements will be made by the graduate program committee. There is an allowable transferable credit maximum that counts toward the diploma program from any other institution, including the Open Learning Agency.

**Course Requirements**

Students complete a minimum of 22 credit hours, with a minimum 2.5 grade point average. Students may take up to a maximum of five courses in one semester but this is considered a heavy course load. Most students would take the seminar course (GLOH 501) plus three or four courses, and then take the additional elective courses in subsequent semesters.

The diploma is normally taken full time and completed within two semesters. Credits applied to a graduate diploma may not be applied to another Simon Fraser University program.

Students must complete all of:

GLOH 501-4 Selected Research Applications in Global Health
GLOH 510-4 Numerical, Analytical, and Computational Foundations for Global Health Studies
GLOH 520-4 Research Methods for Evidence-Based Inference in Global Health
GLOH 530-4 Foundations of Epidemiology in Global Context

Students must also complete a minimum of six credit hours of graduate electives that have been approved by the Faculty of Health Sciences graduate program committee. Most graduate courses in the Faculty of Health Sciences (such as global health GLOH, health sciences HSCI, or population and public health PPH) will be suitable. Graduate courses in other faculties may also be approved.

**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), 604.291.4821 Tel, 604.291.5927 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

P9310 Shrum Science Centre, 604.291.4590 Tel, 604.291.3424 Fax, www.sfu.ca/science

Dean of Science
M. Pilschke BSc (Montr), MPhil (Yale), PhD (Yeshiva)
Associate Dean
R.W. Mathewes BSc (S Fraser), PhD (Br Col)

Development
J. Sims BSc (New Br), MSc (Wat)

Graduate Diploma Offered
Graduate Diploma in Bioinformatics

Graduate Degrees Offered
Master of Environmental Toxicology
Master of Pest Management
Master of Science
Doctor of Philosophy

General Regulations
See “Graduate General Regulations” on page 237 for admission requirements, registration, residence requirements and degree completion time limits.

Admissions
Requirements for a Master’s Degree
The minimum requirements are those stated in the “Graduate General Regulations” on page 237. 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 237.

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 “1.9.4 Preparation for Examination of Doctoral Thesis” on page 242 for further regulations.

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 185 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 for example, of high energy nuclear reactions, muon chemistry and nuclear decay experiments. 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

BB255 Shrum Science Centre, 604.291.4475 Tel, 604.291.3496 Fax, www.sfu.ca/biology

Chair
T.D. Williams BSc (Exe), PhD (Brist)

Graduate Program Chair
L.M. Dill BSc, MSc, PhD (Br Col)

Faculty and Areas of Research
See “Department of Biological Sciences” on page 204 for a complete list of faculty.

L.J. Albright – marine microbiology, fish diseases
A.T. Beckenbach – population genetics, biometrics
I.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. Christians – 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
cephapod biology
M.W. Hart – marine invertebrates
E.B. Hartwick – marine invertebrate ecology
N.H. Haunerland – biochemistry, insect physiology
H. Hutter – developmental neurobiology
C.J. Kennedy – biochemical and aquatic toxicology
A.R. Kermode – plant molecular biology
F.C.P. Law – environmental toxicology, environmental risk assessment
L.F.W. Lesack – ecosystem biogeochemistry, limnology; land-water interactions
C.A. Lowenberger – parasitology, insect vectors
R.W. Mathewes – paleoecology, palynology
J. Mattsson – 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
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

Adjunct Faculty
D. Bertram – seabird conservation biology, marbled Murrelet recovery
S. Boyd – demographics, habitat associations and migration/water ecology of Arctic geese and seaducks
R. Butler – bird migration and conservation
J. Elliott – wildlife ecotoxicology, population ecology of raptors
R. Elnner – functional ecology, natural diet and behavior of birds and marine invertebrates
D. Esler – population biology of waterfowl ecology
P. Gallagher – coastal studies, selective fisheries, marine conservation
D. Gilliespie – biological control, biology of omnivorous insects
M. Goettel – invertebrate pathology, whole organism and population levels (insects and microbes)
D. Lank – behavioral ecology and population and conservation biology
D. McQueen – sockeye salmon nursery lake fertilization and aquatic foodweb dynamics
B. Smith – ecological population modeling for conservation
I. Walker – quaternary palaeoecology, paleolimnology, chironomidae

Associate Members
For areas of research, refer to the department listed.

B. Brandhorst, Molecular Biology and Biochemistry
C. Crawford, Psychology
B. Galidakis, Archaeology
C. Krieger, Kinesiology
R. Peterman, Resource and Environmental Management

L.M. Quarmby, Molecular Biology and Biochemistry
R. Routledge, Statistics and Actuarial Science
G.F. Tibbits, Kinesiology
H. Weinberg, Kinesiology

Biochemistry and Molecular Biology
See page 317 for information about graduate studies in molecular biology or biochemistry.

Biophysics
Students who wish to undertake interdisciplinary work in biophysics may apply to the Department of Biological Sciences or the Department of Physics. See “Graduate General Regulations” on page 237 for biophysics under special arrangements.

Marine Science
Marine Science courses, which may be included in a biology graduate program at Bamfield, BC, are offered in conjunction with certain other universities.
They are available for graduate course credit for MSc and PhD students on recommendation of the supervisory committee.

See “Marine Science MASC” on page 417 for a list of courses.

Admission Requirements

See “Graduate General Regulations” on page 237 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 semester or the second semester 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 courses at the graduate or upper division undergraduate level 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 Simon Fraser University 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 240). Additional course work may be set by the supervisory committee.

For graduate program information, contact the chair, department graduate studies committee.

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 requires a thesis based on original research with relevance to pest management (BISC 849).

Each MPM student must complete all of 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.

BISC 852-3 Biology of Animal Disease Vectors
BISC 884-3 Special Topics in Pest Biology and Management
and one additional 800 level 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.

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

Each student chooses a senior supervisor after admission, with program director consultation. A supervisory committee is formed by the beginning of the third semester 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 will be supervised on this project by the senior supervisor while enrolled in BISC 656. In addition to submission of a report at the completion of the project, the student prepare for an oral examination according to Graduate General Regulations (see “1.9 Preparation for Examinations” on page 241) and will be examined according to section 1.10 (see “1.10 Examinations” on page 242). 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 854-3 Ecotoxicology
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 839-3 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.

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 registering in the co-op program must note the regulations governing minimum fee requirements. See “1.10 Examinations” on page 242.

Environment of Chemistry

CB035 Shrum Science Centre, 604.291.3590 Tel, 604.291.3765 Fax, www.sfu.ca/chemistry

Chair
A.J. Bennet BSc, PhD (Brist), FCIC

Graduate Program Chair
G. Agnes BSc(Adv), PhD (Alta)

Faculty and Areas of Research

See “Department of Chemistry” on page 207 for a complete list of faculty.

G. Agnes - analytical chemistry
A.J. Bennet - chemical biology
N.R. Branda - organic chemistry, materials chemistry
R.A. Britton - organic chemistry
R.B. Cornell - biochemistry*
M.H. Eikerling - fuel cell chemistry
B.D. Gates - nanoscience
I.D. Gay - physical chemistry
R.H. Hill - inorganic chemistry
S. Holdcroft - polymer chemistry
C.H.W. Jones - radiochemistry
G.W. Leach - physical chemistry
D.B. Leznoiff - inorganic chemistry
P.C.H. Li - analytical chemistry
M.A. O’Neill - biophysical chemistry
P.W. Percival - physical chemistry, nuclear chemistry
J.J. Wilkie - theoretical chemistry
V. Williams - organic chemistry
D. Sen - biochemistry*
D.J. Vocadlo - chemical biology
C.J. Walsby - physical chemistry
R.K. Pomeroy - inorganic chemistry
J.J. Ressler - nuclear chemistry
M.A. O’Neill - analytical chemistry
N.R. Branda - organic chemistry, materials chemistry
G.W. Leach - physical chemistry
D.B. Leznoiff - inorganic chemistry
P.C.H. Li - analytical chemistry
M.A. O’Neill - biophysical chemistry
B.M. Pinto - chemical biology
E. Pietner - chemical biology
R.K. Pomeroy - inorganic chemistry
J.J. Ressler - nuclear chemistry
D. Sen - biochemistry*
D.J. Vocadlo - chemical biology
C.J. Walsby - physical chemistry
J.J. Wilkie - theoretical chemistry
V. Williams - organic chemistry
P.W. Percival - physical chemistry, nuclear chemistry
Z.G. Ye - materials chemistry
H.Z. Yu - analytical chemistry

Adjunct Faculty
T.J. Borgford - biochemistry
P.D. Brown - chemical biology
L.R. Dalton - materials chemistry
C.M. Friesen - organic chemistry
M.J. Greisser - biochemistry
A.R. Lewis - nuclear magnetic resonance
C.D. Montgomery - inorganic chemistry
T.J. Ruth - nuclear chemistry
L.E. Sojo - analytical chemistry
A.S. Tracey - nuclear magnetic resonance
N.N. Weinberg - physical chemistry, theoretical chemistry
D.P. Wilkinson - materials chemistry
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 semester of registration. 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 237.

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 devoted to original research. A thesis describing this must be submitted and defended at program conclusion.

PhD Program
Admission Requirements
See “Graduate General Regulations” on page 237.

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 describing this must be submitted 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 presented and defended at the conclusion of the degree program.

Co-operative Education
The Department of Chemistry offers a co-operative education option to allow students to gain work experience outside the academic sphere. Students who are currently enrolled in the department’s MSc program may apply for registration in CHEM 881 and 882. This option is only tenable after the completion of an MSc thesis and defence but before formal graduation. Registration in these courses requires the approval of the graduate program committee.

Department of Earth Sciences
7201 Technology and Science Complex I, 604.291.5387 Tel, 604.291.4198 Fax, www.sfu.ca/earth-sciences
Chair
D.J. Thorkelson BSc, MSc (Br Col), PhD (Car)
Graduate Program Chair
A.J. Calvert BA (Ox), 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 208 for a complete list of faculty.

Admission Requirements
See “Graduate General Regulations” on page 237.

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 devoted to original research. A thesis describing this must be submitted and defended at the conclusion of the degree 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 course work credit hours that are required for the master's program with a cumulative grade point average of at least 3.67
• 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 students entering with a master’s degree, six credit hours of graduate courses in addition to EASC 600, 901 and 998 is required. Graduate courses are chosen from the Course Catalogue (page 323), 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 level EASC courses. Students must maintain a 3.0 CGPA in course work (see “1.5.1 Normal Grading System” on page 239). Failure to do so is taken as evidence of unsatisfactory progress (see “1.5.4 CGPA Required For Continuation and Graduation” on page 239).

With advance approval, a PhD student may take up to one-half of the above course requirements at another university for credit toward the Simon Fraser University PhD degree. Additional course work may be assigned by the supervisory committee, based on the results of the oral candidacy examination.
In addition to their normal course work, PhD students must present two research seminars (EASC 900 and 901). At least one of these seminars should be based on completed or nearly completed thesis work. One seminar may address any earth sciences topic approved by the supervisory committee, and 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 semester of registration, or in the first semester 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. The exam is graded satisfactory/unsatisfactory by an examining committee of the supervisory committee and one external committee member. Students with an unsatisfactory grade must pass a second exam within six months; a second unsatisfactory rating results in program withdrawal.

Students complete 12 credit hours minimum (three course work). The remaining 12 credit hours will be comprised of required elective courses. Normally, MSc candidates should have a BSc cumulative GPA of 3.25 in geography or a related discipline to enter the program. Admission for MSc students is in the fall semester. Applications for fall admission should be completed by February 1 of that year.

**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 semester.

**Degree Requirements**

All candidates for the MSc degree are expected to complete the degree requirements (30 credit hours) in six semesters. The MSc 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, soils, 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 defense of a thesis. Normally, MSc students present proposed research at a one-day conference (research day) held annually in the spring semester. A written proposal should be submitted to the student's supervisory committee, defended in colloquium and approved, by the end of the second semester 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 391.

**Department of Mathematics**

K10512 Shrum Science Centre, 604.291.3331 Tel, 604.291.4947 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)
R. Wittenberg BSc (Natal), MSc (Cape Town), PhD (Proin)

Faculty and Areas of Research
See “Department of Mathematics” on page 215 for a complete list of faculty.

**Department of Science Geography Program**

7123 Robert C. Brown Hall, 604.291.3321 Tel, 604.291.5841 Fax, www.sfu.ca/geography

Chair
E.J. Hickin BA, PhD (Syd), PGeo

Graduate Program Chair
N.K. Blomley BSc, PhD (Bris)

Faculty and Areas of Research
See “Department of Geography” on page 158 for a complete list of faculty.

T.A. Brennan – glacial geomorphology, quaternary environments, regional paleohydrology

S. Dragicic – geographic information science, spatial analysis and modeling

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. Trump-van Meerveld – hillslope and catchment hydrology

**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 286).

**MSc Program**

**Admission Requirements**

Normally, MSc candidates should have a BSc cumulative GPA of 3.25 in geography or a related discipline to enter the program. Admission for MSc students is in the fall semester. Applications for fall admission should be completed by February 1 of that year.

**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 semester.

**Degree Requirements**

All candidates for the MSc degree are expected to complete the degree requirements (30 credit hours) in six semesters. The MSc 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, soils, 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 defense of a thesis. Normally, MSc students present proposed research at a one-day conference (research day) held annually in the spring semester. A written proposal should be submitted to the student’s supervisory committee, defended in colloquium and approved, by the end of the second semester 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 391.
Admission Requirements

See “1.1 Degrees Offered” on page 237 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 237 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

A candidate for the MSc will normally be required to obtain a total of 26 credit hours beyond courses taken for the bachelor’s degree. These 26 hours will consist of at least four courses chosen from the list of core courses below, with at least one course from each of the pairs APMA 900, 901; APMA 920, 922; APMA 930, 935; a further seven credit hours at the graduate level; and a further three credit hours which may be at the graduate level or at the 400 undergraduate level.

Normally courses that are cross-listed as undergraduate courses cannot be used to satisfy graduate level 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

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 a MSc.

PhD candidates pass an oral candidacy exam given by the supervisory committee before the end of the fourth full time semester. The exam consists of a proposed thesis topic defence and supervisory committee questions on related proposed research topics. The exam follows submission of a written PhD research proposal and is graded pass/fail. Those with a fail take a second exam within six months. A student failing 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 324 for APMA course descriptions. The APMA courses replace courses formerly labelled MATH. For MATH 800-899 descriptions, see page 419. Course descriptions for STAT 801-890 can be found on page 446. 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 credits 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 898). See “Graduate General Regulations” on page 237 for further information and regulations.

Project Course Option

A MSc candidate is normally required to complete at least 30 graduate credit hours beyond courses taken for the applicant’s bachelor’s degree. Of these, at least 18 credits should be from courses numbered 800 or above. The course work should normally involve at least three different areas of mathematics subject to the approval of the student’s supervisory committee and the department’s graduate studies committee.

The candidate is required to take and pass the project course MATH 880 and the examination course MATH 882. At most one unsuccessful attempt each at MATH 880 and at MATH 882 is allowed.

See “Graduate General Regulations” on page 237 for further information and regulations.

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 be required to 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 semesters 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 237 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, 604.291.5630 Tel, 604.291.5583 Fax, www.sfu.ca/mbb
Chair
B.P. Brandhorst AB (Harv), PhD (Calif)
Graduate Program Chair
D.L. Baillie BSc, MSc (Br Col), PhD (Corn), Canada Research Chair
Faculty and Areas of Research
See “Department of Molecular Biology and Biochemistry” on page 219 for a complete list of faculty.

D.L. Baillie – developmental genetics, genomics
C.T. Beh – cholesterol molecular genetics and genomics
B.P. Brandhorst – development biology and gene regulation
F.S.L. Brinkman – bacterial genetics and bioinformatics
N.J. Chen – bioinformatics and functional genomics, neuroscience
R.B. Cornell – membrane bound 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. Paetzol – crystallographic analysis of protein targeting and translocation
L.M. Quarmby – cell biology
F.F. Pio – physical biochemistry, x-ray crystallography
J.K. Scott – immunchemistry, immunology
D. Sen – nucleic acid biochemistry, chromosome structure
J.L. Thewalt – membrane biophysics, nuclear magnetic reonance
P.J. Unrau – 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. Borfod – protein biochemistry, biotechnology
S. Gorski – developmental and cellular genetics, apoptosis
S. Jones – bioinformatics of cancer, pharmacogenetics
M. Marra – functional genomics of cancer, bioinformatics, large scale DNA mapping and sequencing
F. Ouellette – bioinformatics, data management tools
E. Stingham – developmental and molecular genetics of cellular signalling

Associate Members
For areas of research, refer to the department listed.
A.T. Beckenbach, Biological Sciences
A.J. Bonnet, Chemistry
N.R. Branda, Chemistry
F. Breden, Biological Sciences
E. Emberly, Physics
N. Forde, Physics
N.H. Haunard, 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. Pletcher, Chemistry
G.F. Tibbitts, Kinesiology
D. Vocadlo, Chemistry

Obtain information about the department and its faculty by visiting the MBB graduate secretary, Department of Molecular Biology and Biochemistry, Simon Fraser University, 8888 University Drive, Burnaby, BC, V5A 1S6, 604.291.5631, mbb@sfu.ca

Admission Requirements
See “1.3 Admission” on page 237 for requirements. Applicants should normally have completed some advanced course work in a related discipline.

Degree Requirements
Students will be assigned a graduate supervisory committee which has the authority to specify an appropriate program of work to meet or exceed the minimum requirements stated below. All students are expected to attend the MBB research seminar series and to participate regularly in a journal club.

### MSc Program

#### Course Work
Minimum requirements are 12 credit hours of graduate courses including MBB 801 and 802 (or three credit hours of colloquia). At least six credit hours must not be seminar or colloquium courses.

#### Research
A major part of the MSc is original research. A thesis describing the work is submitted and defended in accordance with Graduate General Regulations.

### PhD Program

#### Course Work
For those with a BSc or equivalent, 18 credit hours minimum is required, at least 15 of which must be graduate level including MBB 801, 802 (or three credit hours of colloquia) and 806. At least nine credit hours must not be seminar or colloquium courses.

#### 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 241 of the Graduate General Regulations. In addition, all MBB PhD candidates present a public seminar on their research.

### Graduate Diploma in Bioinformatics

The Department of Molecular Biology and Biochemistry and the School of Computing Science cooperate 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 Centre for Disease Control. 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 semesters (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. In consultation with mentors, students will be assigned practicums based on student needs, area of interest, and background. The results of the practicum semester must be written in journal form that will be the subject of an oral presentation. The advisory committee will grade both the oral presentation and written report.

### Core Courses
It is recommended that all four core courses be completed in the first semester, dependent upon semester 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

### Elective Courses
In each of the first, second and third semesters, students must also complete at least three elective courses in each semester from the following programs:
- CMPT 354-3 Database Systems
- CMPT 740-3 Database Systems
- 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
- MBB 331-3 Molecular Biology
- MBB 435-3 Genomic Analysis
- MBB 442-3 Proteomics
- 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

### Graduation Requirements
See “Graduation Requirements” in the Graduate General Regulations.

### CPSC 640-3 Introduction to Bioinformatics

### CMPT 612-6 Research Rotation II (or MBB 612)*

### CMPT 613-6 Research Rotation III (or MBB 613)*

### 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.

### Credit
- 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
- 2 credit will be given for only one of CMPT 740 and CPSC 504

### Practicum Courses
In addition to elective courses as outlined above, students take their first practicum course in their second semester, and their second practicum course in their third semester, dependent upon semester 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, some courses may be replaced with courses from other departments toward their degree. Some courses of interest may include, but are not limited to MBB 801, 802 and 806.

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 credits in addition to MBB 801, 802 and 806.

Department of Physics

PB429 Shrum Science Centre, 604.291.4465 Tel, 604.291.3892 Fax, www.sfu.ca/physics
Chair
B.J. Frisken BSc (Qu), MSc (Northwestern), PhD (Br Col)
Graduate Program Chair
K.L. Kavanagh BSc (Qu), PhD (Cornell)
Faculty and Areas of Research
See “Department of Physics” on page 222 for a complete list of faculty.
L.E. Ballentine – dynamical chaos, foundations of quantum mechanics
J.L. Bechhoefer – liquid crystals, soft condensed matter, pattern formation
D.H. Boal – statistical mechanics and biophysics
C. Bolognesi – semiconductor devices
D. Brouin – highly correlated electronic materials, high Tc superconductivity
B.P. Clayman* – condensed matter, structure and spectroscopy
E.G. Emberly – biophysics, nanostructures
N. Forde – optical tweezers, biophysics
B.J. Frisken – soft condensed matter
A.V. Folov – theoretical cosmology at the particle physics boundary
P. Hajan – quantum computing, laser cooling and trapping of ions
M. Hayden – experimental condensed matter physics, resonance imaging
B. Heinrich – molecular beam epitaxy, superconductivity, surface physics
D.J. Huntley* – luminescence dating, archaeometry
I. Herbut – condensed matter theory
K.L. Kavanagh – materials science, nanostructures
M. Kennett – theories of disordered and out-of-equilibrium systems
G. Kirzenow – condensed matter theory
J. McQuarrie – ultra cold degenerate gases
P. Mooney – semiconductor physics
D.O’Neil – experimental high energy physics
M. Plischke – condensed matter theory
J.E. Sonier – MuSR spectroscopy, high Tc superconductivity
L.E. Pogosian – theoretical cosmology at the particle physics boundary
J.L. Thewalt – biophysics, NMR studies of membranes
M.L.W. Thewalt – semiconductor physics
H.D. Trotter – lattice quantum chromodynamics, phenomenology of strong and weak interactions, field theoretical study of non-Abelian gauge theories
M. Vetterli – intermediate energy and particle physics
K.S. Viswanathan* – high energy theory, classical and quantum gravity
S. Watkins – semiconductor physics
M. Wortis* – solid state theory, statistical mechanics, surface physics, membranes, biophysics
Adjunct Faculty
B.S. Davids – experimental nuclear structure and astrophysics
B.K. Jennings – theoretical intermediate energy physics
R.M. Woloshyn – theoretical particle physics, Lattice field theory
M. Scheinfein – magnetism, nanostructures
M. Zuckermann – solid state physics, statistical mechanics, biophysics, lipid membranes
Associate Members
For areas of research, refer to the department listed.
M. Elkerling, Chemistry
D.E. Nelson, Archaeology
*emeritus

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 237.

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 237.

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 to a PhD program with a CGPA that normally will be at least 3.67 calculated over a minimum of 15 graduate level credits, 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 interdisciplinary work in Biophysics may apply to the Department of Physics or the Department of Biological Sciences. Those who wish to work in biophysics under special arrangements should see “1.3.4 Admission to a Doctoral Program” on page 238.

Chemical Physics

Students who wish to undertake interdisciplinary work in chemical physics may apply to the Department of Physics or to 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 238.

Department of Statistics and Actuarial Science

K10545 Shrum Science Centre, 604.291.3803 Tel, 604.291.4368 Fax, www.stat.sfu.ca
Chair
R.D. Routledge BSc (Qu), MSc (Alta), PhD (Dal)
Graduate Program Chair
R.A. Lockhart BSc (Br Col), MA, PhD (Calif)
Faculty and Areas of Research
See “Department of Statistics and Actuarial Science” on page 226 for a complete list of faculty.
R. Altman – correlated discrete data and latent variable models
D. Bingham – design of experiments, industrial statistics, Bayesian methods
C.B. Dean – spatial statistics, disease mapping, statistics in health
J. Graham – statistical genetics
J. Hu – incomplete data analysis, interim reviews and related design issues in health studies
R.A. Lockhart – goodness-of-fit testing, inference for stochastic processes, large sample theory
Y. Lu – risk theory, stochastic modeling, statistical applications
W.B. McNeney – biostatistics, epidemiology and epideiologic study design
G. Parker – financial risk management, interest rate risk
R.D. Routledge – biometrics, estimating the sizes of animal populations
C.J. Schwarz – modelling of animal population dynamics, capture-recapture methods
R.R. Sitter – sample surveys, design of experiments, biostatistics, industrial statistics
M.A. Stephens* – goodness-of-fit testing and directional data
Admission Requirements

See “1.3.4 Admission to a Doctoral Program” on page 238 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 wishing to pursue graduate studies in actuarial science may, with permission of their supervisory committee and the graduate studies committee, follow the statistics program (shown farther down), 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

As well, students must submit and successfully defend a project based on a problem in actuarial science, as outlined in the Graduate General Regulations (see “1.10.1 Thesis Examination” on page 242).

Statistics

MSc Program

The program instructs students on a wide range of statistical techniques and provides experience in the practical application of statistics. The program teaches statistical expertise in preparation for a career in either theoretical or applied statistics.

Students in the program will be required to complete at least 30 credit hours of course work in statistics and related fields beyond those courses that were taken for the bachelor's degree. Of these 30 hours, at least 24 are to be in graduate courses or graduate seminars, and the remaining six may be chosen from graduate courses or those 400 level 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

As well, students must submit and successfully defend a project based on a problem in actuarial science, as outlined in the Graduate General Regulations (see “1.10.1 Thesis Examination” on page 242).

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 level 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 semesters 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 237 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 semesters 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.
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Special Arrangements SAR 445
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Sustainable Community Development SCD 447
TechOne TECH 448
Urban Studies URB 448
Women’s Studies WS 449

Actuarial Mathematics ACMA 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 C of the Society of Actuaries, and Exam 4 of Casualty Actuarial Society. Prerequisite: STAT 285. Quantitative.

ACMA 320-5 Actuarial Mathematics I
Survival distributions: age at death, life tables, fractional ages, mortality laws, select and ultimate life tables. Life insurance: actuarial present value function (apv), moments of apv, basic life insurance contracts portfolio. Life annuities: actuarial accumulation function, moments of apv, basic life annuities. Net annual premiums: actuarial equivalence principle, loss function, accumulation type benefits. Actuarial reserves: prospective loss function, basic contracts, recursive equations, fractional durations. Covers part of the syllabus for Exam M 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
Ratemaking: terminology, process, trend, ultimate losses, expense provisions, profit and contingencies, overall rate indications, classification rates, increased limits. Individual risk rating: prospective systems, retrospective rating, design. Loss Reserving: accounting concepts, definitions, principles, loss reserving process. Risk classification: relationship to other mechanisms, criteria for selecting rating variables, examples, efficiency, estimating risk re-latives. This course covers part of the syllabus for Exam 5 of Casualty Actuarial Society. Prerequisite: ACMA 320. Cannot repeat for credit if taken as ACMA 490 previously. Quantitative.
**ACMA 475-3 Theory of Pension**


**ACMA 490-3 Selected Topics in Actuarial Science**

The topics included in this course will vary from semester to semester depending on faculty availability and student interest. Prerequisite: dependent on the topic covered.

**ACMA 495-3 Directed Studies in Actuarial Science**

Independent study and/or research in topics chosen in consultation with the supervising instructor. Prerequisite: written permission from the Department of Statistics and Actuarial Science undergraduate curriculum committee.

**ACMA 820-4 Stochastic Analysis of Insurance Portfolios**

Life insurance models. Interest rate models for life insurance; time series, stochastic differential equations, estimation, portfolios of identical policies. Diversified portfolios. Prerequisite: ACMA 320.

**ACMA 821-4 Advanced Actuarial Models**


**ACMA 822-4 Risk Measures and Ordering Actuarial risks.**

Insurance premium calculation principles and properties. Risk measures and ordering. Applications. Prerequisite: ACMA 335.

**ACMA 850-4 Actuarial Science: Selected Topics**

**Applied and Computational Mathematics APMA Faculty of Science**

**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**


**APMA 902-4 Applied Complex Analysis**

Review of complex power series and contour integration. Conformal mapping, Schwartz-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 systems, 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 will 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’s 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 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 Paleolithic/Palaeanolian periods (ca 40,000 BP) to the rise of civilization and empires, in both the Old and New Worlds. Breadth-Social Sciences.

**ARCH 105-3 The Evolution of Technology**

A history of technology from earliest times to the beginning of the Industrial Revolution. The course will discuss the causes and effects of technological change, as illustrated by specific technological developments including stone tools, metallurgy, agriculture, etc. 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:**

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 paleoanthropologists, 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 Palaeolithic to the Bronze Age. Basic concepts used in reconstituting prehistoric cultures, and the artificial 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 populations 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 the 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 330-3 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.

ARCH 330W-3 Prehistory of Latin America
Intensive study of the prehistoric cultures of Latin America. Emphasis 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-S 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 Zoarchaeology
An introduction to the practical problem 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, exhibit 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-S 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 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 350-0 Practicum I
First semester of work experience in the Archaeology Co-operative Education Program. 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 351-0 Practicum II
Second semester of work experience in the Archaeology Co-operative Education Program. 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 of identification and 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 of the rise of 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 375-5 Quantitative Methods in Archaeology
Theory, method, and operation of the application of statistical techniques to the description, classification, and interpretation of archaeological data. Prerequisite: ARCH 201, and either STAT 203 (formerly 103) or PSYC 210. Quantitative.

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 among 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 Archaeobotany
An introduction to the recovery and analysis of macroscopic archaeological plant remains. The major methodological and interpretive issues in archaeobotany 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...
ARCH 372. The course focuses on the relevance to theoretical problems. Prerequisite: 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 436-5 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 geomorphological contexts of archaeological sites and their sedimentary and petrological 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 450-0 Practicum III
Third semester of work experience in the Archaeology Co-operative Education Program. Prerequisite: normally 45 semester hours with a CGPA of 3.0 and ARCH 450.

ARCH 451-0 Practicum IV
Fourth semester of work experience in the Archaeology Co-operative Education Program. 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 from 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 Asian-Canadian Studies I
An introductory course on Asian-Canadian interactions. It will survey various issues, both historical and contemporary, including those involving Asian-Canadians.

ASC 102-3 Introduction to Asian-Canadian 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 introduction to historical and cultural perspectives on China. Topics covered will include different aspects of traditional Chinese culture with a view to understanding contemporary Chinese society. Prerequisite: 15 credit hours. Students who have taken this course as JAPN 250 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 this course as 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 take 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 Selected 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 Selected 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 104-4 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 104 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 expression 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 one of the BISC breadth courses (e.g. BISC 110, 111 and 112). Breadth-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 pre-requisite 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). Breadth-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 of life, the evolution of life on earth, 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. Breadth-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. Breadth-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. Breadth-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 under 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 303-3 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 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 306-3 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 310-3 The Natural History of British Columbia**
An introduction to the natural history of British Columbia, studying the ecology, distribution, and general characteristics of organisms representative of various biotic regions of the province 6 terrestrial, marine or freshwater. The particular taxa and regions studies may vary between offerings. Field trips of one to four days are normally a required part of the course. Prerequisite: 75 credit hours including BISC 101 and 102.

**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 interdiscipline science. This course is a prerequisite for all advanced toxicology courses. Prerequisite: MBB 221. Corequisite: BISC 312.

**BISC 316-3 Vertebrate Biology**
A study of the interrelationships of animals and their physical and biotic environment. Prerequisite: BISC 204.

**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 337-3 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 341-0 Practicum I**
First semester of work experience in the Biological Sciences Co-operative Education Program. Prerequisite: acceptance in the biological sciences co-operative education program.

**BISC 342-0 Practicum II**
Second semester of work experience in the Biological Sciences Co-operative Education Program. Prerequisite: BISC 341 and re-admission to the science co-operative education program.

**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 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 the life history evolution (pollination, defense, dispersal). Experimental and observational laboratory exercises are primarily conducted outdoors. Prerequisite: BISC 204.

**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
COURSES

BISC 407-3 Population Dynamics
An evaluation of factors influencing the natural fluctuation of regulation of animal population numbers. Corequisite: BISC 304.

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 416-3 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 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-focus selection theory, introduction to quantitative genetics, and Fisher's fundamental theorem of natural selection. Prerequisite: BISC 202 and STAT 201.

BISC 429-3 Experimental Techniques I: Separation Methods
Theory and practice of analytical and preparative separation methods in biology. Prerequisite: BISC 329.

BISC 429W-3 Experimental Techniques I: Separation Methods
Theory and practice of analytical and preparative separation methods in biology. Prerequisite: BISC 329. Writing.

BISC 430-3 Plant Pathology
Fungi, bacteria, viruses, nematodes, parasitic higher plants and insect vectors as agents of plant disease will be considered. Etiology 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 Paleoeology and Palynology
The principles of paleoenvironmental 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 causes, consequences of pest problems and the natural and applied factors and processes that determine their occurrence and intensity. Prerequisite: BISC 317, or 75 credit hours.

BISC 439-3 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
Applications of the principles of evolutionary biology 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 bases 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 443-0 Practicum III
Third semester of work experience in the Biological Sciences Co-operative Education Program. Prerequisite: BISC 342 and re-admission to the science co-operative education program.

BISC 444-0 Practicum IV
Fourth semester of work experience in the Biological Sciences Co-operative Education Program. 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 446-0 Practicum V
Fifth semester of work experience in the Biological Sciences Co-operative Education Program. Prerequisite: BISC 444-0 and re-admission to the science co-operative education program.

BISC 449-3 Experimental Techniques III: Biochemistry
Techniques in histochemistry. Principles and application of bright-field-phase contrast fluorescence and interference microscopy. Prerequisite: BISC 329.

BISC 455-3 Endocrinology
A study of endocrine organs and their role in integrating physiological functions in animals. Prerequisite: BISC 305 and 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 472-3 Selected Topics in Biology
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 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 Course Timetable and Exam Schedule.

BISC 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 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 professor to act as research advisor.

BISC 499-3 Undergraduate Research II
A student will be permitted to enroll in this second research course only with the prior written agreement of a professor to act as research advisor. A different advisor is required than for BISC 498. Prerequisite: 90 credit hours.

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 Project
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 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
Bionomics, 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 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 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 illustrating the 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 includes 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 toxicology, 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 behavioral 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 855-3 Biochemical Toxicology
This course examines the biodynamics and actions of toxicants on several key biological systems within living organisms at the biochemical and molecular levels. Prerequisite: BISC 313.

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 883-3 Special Topics in Environmental Toxicology
Special topics course with emphasis on recent developments in environmental toxicology.

BISC 884-3 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 896-6 MSC Thesis
BISC 899-6 PhD Thesis

**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. 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 225-0 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.

**BUS 237-3 Introduction to Computers and Information Systems in Business**
An introduction to computer based information systems and to their applications in business, including a discussion of issues involved in the use of information systems by management. The course also provides hands on tutorial experience in the use of computers, with particular emphasis on business applications of micro computers. 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 in assets and their 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.

**BUS 304-3 Introduction to Business**
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 alignments of values, policies, technology and legal approaches between the modern organization and its broader public. 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. Prerequisites: BUS 101, BUS 254 or BUS 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 unproven nature of the project. This course examines how entrepreneurs and their financial backers can spot, create and manage value. Topics covered include option 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
Investments 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 Management Accounting
This course is designed to introduce students to the role of financial and management accounting in the decision making process. 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 for-profit organizations will also be provided. Prerequisite: BUS 320-3; 60 credit hours. Quantitative.

BUS 322-3 Intermediate Managerial Accounting
In-depth examination 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 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 325-0 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.

BUS 326-0 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.

BUS 327-0 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.

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 334-4 Data and Decisions II
This course is an extension of BUED 232. It develops and applies the quantitative models that are most directly relevant to business decisions. Beginning with material presented in decision and forecasting modeling, the course moves on to decision analysis, business simulation, quality control, and an introduction to optimization. Prerequisite: MATH 157 and BUED 232, 60 credit hours. Quantitative.

BUS 338-3 Managing Technological Innovation
An introduction to the practice of technology 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 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 in managing fundamental marketing concepts. Students will be able to solve real life marketing problems. Particular emphasis will be placed on understanding consumer behavior and 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 343-3 Introduction to Marketing
The environment of marketing; relation of social sciences to marketing; evolution of theoretical principles and research; definition of market; 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; international legal 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 360-3 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-3 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 Project Management
Project management is a multidisciplinary process. The planning and execution of an effective project is based on both intuition and attention to detail. An excellent project manager must be comfortable with “hard” skills such as budgeting, scheduling earned value analysis as well as “soft” skills such as facilitation, communication and negotiation. This course is designed to expand students’ knowledge of both hard and soft skills involved with projects in a practical way. Students will be exposed to project management software, specifically Microsoft Project.
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Students will also experience what it is like to be part of a diverse project team while working on a specific project. Prerequisite: 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 the external environment of the organization. Contextual 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. For each subject an overview of current Canadian issues and practices is presented. Prerequisite: BUS 272 (or 372); 60 credit hours.

BUS 393-3 Commercial Law
Common law, equity, and statute law; contracts, agency, and negotiable instruments; partnership and corporation law; international commercial law. Prerequisite: 60 credit hours. BUOE 391 is not to be taken concurrently with BUS 393.

BUS 394 – 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, financial 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 414-7 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. Students who have taken BUS 492 under the topic Security Analysis may not take BUS 417 for further credit.

BUS 416-3 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; foreign exchange risk; interest rate swaps; international portfolio management; comparative markets; 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 Advanced Derivative Securities may not take BUS 419 for further credit.

BUS 420-3 Advanced Accounting
In-debt coverage of advanced 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 deterministic, probabilistic costs, resale price and price level adjustment models. Prerequisites: BUS 321, 360, BUS 207 or ECON 301; 60 credit hours.

BUS 422-3 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, 336, 360; 60 credit hours.

BUS 425-0 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.

BUS 426-3 Auditing and Assurance: Concepts and Methods
A study of the conceptual foundations and the nature and purpose of the external audit function. The course will also discuss some of the more recent developments in auditing such as comprehensive auditing, computer auditing, and the use of statistical methodology in auditing. Prerequisite: BUS 321, 360 and 60 credit hours.

BUS 431-3 Business with East Asian Countries
This course examines the opportunities and challenges of doing business with the Pacific Rim countries such as China, Japan and Korea. Topics include the following: the political and economic systems as they affect foreign investment; social and cultural systems as they affect management practices; the conduct of business negotiations for market entry; and marketing strategies. Prerequisite: BUS 346, 360, and one of BUS 380 or 432; 60 credit hours.

BUS 432-3 International Human Resource Management
Significance of multinational complexity and diversity (cultural, economic, demographic, etc.) to the human resource function. Interplay among human resource functions (employee procurement, allocation, utilization), types of employees, and countries of operation. Prerequisite: BUS 360 and one of BUS 381 or 374; 60 credit hours. Recommended: BUS 346.

BUS 435-3 Management of International Firms
Strategic requirements for the management of multinational corporations. Firm-specific and institutional challenges facing global managers in formulating and implementing profitable strategies. Prerequisite: BUS 346, 360 and one of BUS 380 or 432; 60 credit hours.

BUS 437-3 Decision Analysis in Business
A seminar in the use of Bayesian techniques in business decisions. Prerequisite: BUS 336, 360; 60 credit hours.

BUS 440-4 Simulation in Management
Decision-making
Development and use of simulation models as an aid in making complex management decisions. Hands on use of business related tools for computer simulation. Issues related to design and validation of simulation models, the assessment of input data, and the interpretation and use of simulation output. Prerequisite: BUS 336, 360; 60 credit hours.

BUS 442-4 Introduction to Marketing Research
A course in the management of marketing research. The basics of the design, conduct, and analysis of marketing research studies. Prerequisite: BUS 343, 336, 360; 60 credit hours.

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, 360; 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. Researching and forecasting international markets. The management of international marketing. Prerequisite: BUS 343, 360; 60 credit hours. Recommended: BUS 346.

BUS 448-4 Advertising and Sales Promotion
An interdepartmental 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 promotions, 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
Addressing a significant 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 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
This course is designed to familiarize the student with theories, tools and techniques for management support systems. The course will cover topics from decision support systems (DSS), executive support systems (ESS) and expert systems (ES). It will cover a variety of DSS, ESS and ES tools ranging from spreadsheets to fourth generation languages accessing corporate databases, to expert system shells and executive support system builders. Prerequisite: BUS 336, 360, 362 (or 364); 60 credit hours.

BUS 464-3 Building Business Systems
Two trends are shaping the use of information in organizations: the increasing importance of cross-functional business processes and the use of enterprise resource planning (ERP) information systems to support these processes. This course will take a closer look at techniques for analyzing, designing, and implementing information systems and information technology in support of integrated business processes. The material will be drawn from literature in the business process re-engineering and enterprise resource planning subject areas. Prerequisite: BUS 360, 362 (or CMPT 370). Recommended: CMPT 100.

BUS 466-3 Managing Data Communications
The students will be exposed to business issues in the planning, implementation and management of data communications in organizations. They will study the changing place in industry as a result of new data communications technology. Also, they will become familiar with the various technical levels of communications systems, and the various standards and configurations that are currently being used. The Novell NetWare LAN system will be used as an example of a communications system, to demonstrate features required of a communications network manager. Prerequisite: BUS 360, 362 (or 364); 60 credit hours.

BUS 468-3 Management Issues in Information Systems
The focus of this course is on the management, not the technical, issues surrounding Information Technology. Using cases, the course will introduce various theories and models of the management of information technology (IT), the application of IT to management situations, and some of the current issues surrounding IT. Prerequisite: BUS 360, 364; 60 credit hours. Corequisite: BUS 462 and/or 465 can be taken concurrently with BUS 468.

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 374; 360 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 design, produce, 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 businesses; 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 478-3 Seminar in Administrative Policy
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 481-3 Change Management
Examination of the day-to-day administration of various employment systems in both unionized and non-unionized settings. Employment systems and their 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 482-3 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, interpersonal 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 interest of faculty and students. Prerequisite: permission of the faculty; 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 – 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 intensive and independent reading and research course on topics selected in consultation with the supervising instructor, and approved by the dean of the faculty. Prerequisite: permission of the faculty; 60 credit hours.

BUS 507-4 Managerial Economics
The course combines economic theory and quantitative methods techniques to develop models and rules for managing resources efficiently. Prerequisite: introductory statistics/computing/mathematics, or permission of the instructor.

BUS 512-4 Introduction to Business Finance
An overview of the investment and financing decisions of firms. Topics to be covered include valuation, the capital expenditure decision, financial markets, and accounting and dividend policy. Prerequisite: BUS 507 and 528 or permission of the instructor.

BUS 527-3 Financial Accounting
Concepts, principles and contemporary issues in financial accounting from the user perspective. 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 diverse 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
Concepts and principles in financial accounting from the user perspective.

BUS 551-2 Managerial Accounting
Concepts and principles of managerial accounting focussing on the use of accounting information by internal decision makers. Prerequisite: BUS 527 or equivalent.

BUS 552-3 Managerial Accounting
Concepts and principles of managerial accounting focussing on the use of accounting information by internal decision makers. Prerequisite: BUS 527 or equivalent.

BUS 553-4 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
BUS 559-4 Special Topics
BUS 560-3 Directed Studies
Prerequisite: requires prior permission of the academic director.

BUS 561 – 562-2 Special Topics
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 relations, 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 organization development.

BUS 606-4 Financial Management
Finance is the area 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 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.

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 652-2 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 653 – 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 725-0 MBA Co-op Practicum I
First semester of work experience. This course is open only to MBA students. The co-op education program co-ordinators must be contacted prior to registration for this course. Prerequisite: students must be enrolled as a graduate student in the MBA program, and must have a CGPA and previous SGPA of at least 3.0. Students entering the MBA program with a degree other than in business normally must complete all 500 level courses before beginning a co-op practicum. Students entering the MBA program with a business/commerce degree must complete a minimum of one semester with at least two courses at the 800 level before beginning a co-op practicum.

BUS 726-0 MBA Co-op Practicum II
This is the second semester of work experience. This course is open only to MBA students. The co-op education program co-ordinators must be contacted prior to registration for this course. Prerequisite: BUS 725. Students must be enrolled as a graduate student in the MBA program, and must have a CGPA and previous SGPA of at least 3.0.

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 co-op education program co-ordinators must be contacted prior to registration for this course. Prerequisite: BUS 725, 726. Students must be enrolled as a graduate student in the MBA program, and must have a CGPA and previous SGPA of at least 3.0.

BUS 750-4 Managing Technological Innovation
This course provides an overview of product and process innovations in industry, as well as the effective organization and management of the technological change process in new ventures, multi-divisional and multinational enterprises.

BUS 752-4 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 754-4 Marketing Tech-based Products and Services
What differentiates high-tech markets from more traditional ones is the environment or 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 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 Supply Chain Management
This course demonstrates how strategic competitive advantages can be gained through supply chain management of the processes of logistics, production, delivery and after sales service. Concepts such as flexible manufacturing, just in time inventories and service quality will be examined.

BUS 759-4 Special Topics
This course provides flexibility to address emergent topics in Technology Management.

BUS 761-2 Leadership for the Technology Driven Enterprise
Developing and balancing critical management competencies at the individual, interpersonal, team and organizational levels. Focus is on effective organization, motivation and leadership.

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 764-2 Financing the Organization
A basic understanding of the sources of capital, how to allocate it and how to regenerate it is necessary for technology managers. This course surveys the sources of venture capital, initial public offerings, mergers and debt capital. It also concentrates on net present values, internal rates of return, and other tools for capital budgeting and valuation.

BUS 766-2 Organizational Focus and Control Through Financial Management
Success is often tempered by the constraint of money. Project budgeting, cash flow projection, and contingency planning are tools that help keep the flow of funds in balance. This course looks at how the technology manager can influence the flow of funds through numerous measures such as leverage, equity injections, credit policies, dividends and taxes.

BUS 770 – 772-2 Special Topics
BUS 774-4 Special Topics
BUS 776-4 Special Topics
BUS 778-4 Directed Studies in Management of Technology
Individual Study with a faculty member. A course outline must be approved by the graduate program committee.

BUS 780-6 Applied Project
Students will undertake a strategic business analysis and write an extended essay jointly supervised by a Simon Fraser University faculty member and an industry partner. The Management of Technology program director and a faculty member will negotiate the purpose, content and deliverables of each project with the student and the sponsoring organization.

BUS 781-3 Applied Project (Completion)
BUS 801-4 Research Techniques
The design, conduct, and analysis of business research including both field and laboratory research methods. Prerequisite: BUEC 333, or permission of the instructor.

BUS 802-4 Foundations of Financial Economics
An introductory course for GAWM students in the theory of finance and investor behavior. It covers investor financial decision-making under uncertainty as well as capital market equilibrium.

BUS 803-4 Financial Econometrics
The foundations in econometrics for the GAWM program. Reviews econometric methods for testing asset-pricing models and for performance measurement.

BUS 804-4 Strategic Analysis for Wealth Management
Will teach students to analyse the competitive prospects for a given industry as well as specific companies within that industry. It will also include analysis of strategic choices in the financial services industry.

BUS 805-4 Capital Markets
Extends concepts in BUS 802 to various estimation and empirical issues in capital markets that are important for wealth and asset management. Topics in behavioral finance as well as performance measurement and attribution will also be covered. Asset allocation models will be studied covered with reference to the theoretical literature as well as models actually used in practice.

BUS 806-2 Client Relationship and Leadership Effectiveness I
Emphasizes how to become an effective investment counsellor. Topics covered will include leadership styles, client relationship development, interpersonal communication, coaching/counselling strategies and skills, conflict and team management, and performance measurement. Information systems for effective client relationship management will also be covered.

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 809-2 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. Students will be required to produce a research report on a given equity security analysing the prospects for the industry in which it operates, the company’s competitive position within its industry and whether the current market price fairly represents these prospects. This course will also introduce students to
BUS 819-4 Final Project for GAWM Students
Students will be required to complete a written project equivalent to one full course (4 credits). 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 822-4 Decision Theory
An examination of prescriptive (Bayesian) theory of decision making under uncertainty and critical investigation of the theory. Prerequisite: BUEC 333, MATH 157, or permission of the instructor.

BUS 831-4 Industrial Relations
Negotiation, arbitration, collective agreements, work stoppages, labor-management co-operation.

BUS 836-4 Human Resource Practices for Managers
This course is focused on understanding how organizations can build, maintain and compensate their pool of employees. Topics include recruitment and selection practices, compensation and incentive systems and diversity management.

BUS 837-4 Effective Leadership and Management in Organizations
Effective leadership is a core competency in modern organizations. This course provides an overview of leadership theories, principles and practices. An experiential learning approach is used to develop students’ leadership skills and competencies.

BUS 839-4 Organizational Assessment and Planned Change
Current theory, research and practice in organizational diagnosis and planned change. Prerequisite: advanced undergraduate course work in micro and macro organizational behavior.

BUS 845-4 Marketing Measurement
The generation and analysis of non-accounting information from sources both internal and external to the firm, with the purpose of understanding the use of such measurements in marketing segmentation. Prerequisite: BUS 801.

BUS 846-4 Data Mining and Models in Marketing
The construction, analysis and application of models of marketing phenomena. The focus is on turning data into strategically useful information by using analytical tools. Prerequisite: BUS 801.

BUS 847-4 Advanced Consumer Behavior
A study of the results of consumer interactions with the forces affecting purchase decisions. The influence of environmental, corporate, and governmental factors on consumer behavior and the processes of consumer decision-making will be examined. Prerequisite: BUS 347, 801 or permission of the instructor.

BUS 848-4 Research in Marketing Strategy
Research in strategy integrates marketing models, competitive marketing theories, and marketing strategic analysis. Cases and computer simulations may be used to demonstrate competitive strategic decisions. Prerequisite: BUS 801.

BUS 850-4 Theoretical Issues Strategic Management
This course investigates the theoretical basis of strategic management particularly in the areas of strategic decision making, formulation and implementation. Prerequisite: BUS 578 or equivalent.

BUS 852-4 Researching the Corporation in Canadian Society
Research in contemporary theory and methods of investigating and conducting scientific research in Canadian corporations.

BUS 854-4 Business and Government Regulation
The theory and practice of public policy in the area of industrial organization. Topics include anti-competes, utility regulation, patent policy, and other policies directed at market failure. Prerequisite: ECON 200, or permission of the instructor.

BUS 856-4 Special Topics in Financial Risk Management
A course outline must be approved by the Business Graduate Program Committee.

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 858-4 Business and the Public Interest
Society requires business to act in the ‘public interest’ by means both of explicit (legislated) rules and implicit social contracts. This course deals with these social contracts and will include discussions of employment policies, investment policies, charitable donations, environmental concerns and community service.

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 860-4 Administration of Public Enterprises
History, models of organizations of public corporations and their divergence from private counterparts. Public accountability decision-making, cost-benefit theories.

BUS 862-4 Contemporary Topics in International Business
The analysis of specific issues in international business/multinational firms, Canada’s regulations, international financial management, international marketing, international operations, foreign investment and the international environment.

BUS 863-2 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 864-4 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 865-4 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
BUS 884-4 Comparative Management

The course compares and contrasts similarities and differences in management styles and practices across countries. It seeks to develop an appreciation of what it is like to work with people from other cultures. Prerequisite: permission of the instructor.

BUS 883-4 International Business and Multinational Enterprises

The course identifies theories, information and research findings which are useful in understanding different aspects of managing multinational operations, such as international investment, organization and control. Prerequisite: permission of the instructor.

BUS 884-4 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 a 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 and 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 it applies 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 877-4 Managing Information Technology

The course is designed to give students the knowledge to take a leadership role within an organization with respect to information technology. Students will learn to analyse complex business situations and solve real-world IT-related management problems. The students will work in a team-based environment to complete an IT-related project and should demonstrate effective analysis, communication and technical competence through class participation, presentations and report writing.

BUS 878-4 Electronic Commerce

Electronic commerce, altering the way many organizations do business. This course will examine electronic commerce from both a managerial and a technological perspective. The objectives of the course are to provide students with an understanding of the technologies underlying e-commerce along with theoretical perspectives that will enable students to understand the broader implications of e-commerce.

BUS 882-4 Doing Business with the Pacific Rim Countries

The course seeks to examine the opportunities and challenges of doing business with the Pacific Rim countries. Topics include the analysis of foreign investment climate, business negotiations and marketing strategies. Prerequisite: permission of the instructor.

BUS 866-2 Enterprise-wide Strategic Risk Management

The course is to provide students with an understanding of the technologies underlying e-commerce along with theoretical perspectives that will enable students to understand the broader implications of e-commerce. This course seeks to examine the opportunities and challenges of doing business with the Pacific Rim countries. Topics include the analysis of foreign investment climate, business negotiations and marketing strategies. Prerequisite: permission of the instructor.

BUS 900-4 Methodology Seminar/Research Workshop

This course, which will meet twice weekly, will devote one half to an examination of methodological approaches including selection, planning and conduct of research and philosophy of science and one half to attendance at faculty and graduate student workshop presentations. The methodology section of the course is intended to place students’ research methodology in a broader context for critical evaluation. The workshop section will require students to present their own research findings for critical evaluation. Prerequisite: completion of prior required research courses, or permission of the instructor.

BUS 865-4 International Human Resource Management

The course seeks to identify how cultural differences affect the practice of international human resource management; and to understand the linkage between international human resource management and role of the corporation. Prerequisite: permission of the instructor.

BUS 886-4 Management of International Firms

This course deals with strategic requirements for the management of multinational corporations. Firm-specific and institutional challenges facing global managers in formulating and implementing profitable strategies are also discussed. Prerequisite: BUS 883.
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 the 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. Graded on a Satisfactory/Unsatisfactory basis. 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.

BUS 998-2 Research Project (Completion) BUS 999-4 MBA Research Project

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. STAT 270.

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 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 301 may not take BUEC 280 for further credit.

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 must contact the Undergraduate Advisor in Economics. Students with credit for ECON/COMM 236 may not take BUEC 333 for further credit. Quantitative.

BUEC 384-3 Industrial Relations
This course examines industrial relations systems, focusing on the economic and policy environment and how this shapes the strategic choices in employment systems. Characteristics, conflict resolution processes and outcomes of various employment systems will be examined. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours. Students with credit for BUEC 386 may not take BUEC 384 for further credit. Recommended: BUS 272.

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 BUS 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 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 427-3 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; torts; criminal behavior; family law; and corporate bankruptcy law.

Prerequisite: ECON 301. Students with credit for BUEC 495 cannot take this course for further credit.

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, ethnicity and multiculturalism, industrialism, regional conflict, social movements, nationalism and Canada's social structure, classes and elites.

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 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 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: 60 credit hours.
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 Special Topics: Cyberspace: the Next Frontier? may not take CNS 392 for further credit.

CNS 481-3 Special Regional Topics
The role of the regions of regionalism in Canada is increasingly problematic, 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, based on 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 Faculty of Science
CHEM 110-3 Introductory Chemistry
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 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 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 111 or CHEM 110 (or 101). 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: electricity; chemical thermodynamics; kinetics. Students who intend to take further laboratory courses in chemistry must take CHEM 122 concurrently with CHEM 126. Prerequisite: CHEM 121 or 120 (or 102) Recommended: MATH 151 (or 154) and PHYS 121 (or 102) as a corequisite. Quantitative/Breadth-Science.

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/Breadth-Science.

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 several currently 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 bone and wood to modern plastics and superconductors. The chemical principles that give rise to different materials properties will be examined, with an emphasis of 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. 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 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 opinions 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 sampling, 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/Breadth-Science.

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/Breadth-Science.

CHEM 282-2 Organic Chemistry II
CHEM 286-2 Organic Chemistry Laboratory II
Laboratory work chosen to complement CHEM 285. Prerequisite: CHEM 281. Corequisite: CHEM 282. Quantitative.

CHEM 306-0 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. Prerequisite: completion of 26 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 307-0 Practicum II
This is the second semester of work experience in the Chemistry Co-operative Education Program. 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 biology. 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 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). Corequisite: CHEM 231 (or 321). Quantitative.

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 406-0 Practicum III
This is the third semester of work experience in the Chemistry Co-operative Education Program. 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 407-0 Practicum IV
This is the last semester of work experience in the Chemistry Co-operative Education Program. Prerequisite: CHEM 406. Minimum CGPA of 2.67 (or permission of co-op co-ordinator).

CHEM 408-0 Practicum V
Optional semester of work experience in the Chemistry Co-operative Education Program. 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 optoelectronic 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 radiosotopes 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 459-3 Special Topics in Organic Chemistry
An advanced, in-depth 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-practical theory, electrochemistry. Prerequisite: MATH 251; CHEM 280 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 469-3 Special Topics in Physical Chemistry
Selected topics 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. The 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, molecular mechanisms of the optical, electronic, ionic, magnetic and dielectric 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 743-3 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 carbohydrate-based templates in organic synthesis, advances in glycose 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 Organic 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 valency. 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 898-6 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. The course will study phonetics, vocabulary, syntax, grammar and culture. Prerequisite: permission of the instructor.

CHIN 101-3 Mandarin Chinese II
Continues to build on all four language skills acquired in CHIN 100. Prerequisite: CHIN 100 or permission of the department.

CHIN 151-3 Spoken Mandarin for Speakers of Other Chinese Dialects
This course is especially designed for native speakers of Chinese Dialects other than Mandarin who, though able to read and write Chinese fluently, have no knowledge of spoken Mandarin. Speakers of a Chinese dialect who have taken Mandarin courses should not take this course. Prerequisite: ability to read, write and speak a Chinese dialect.

CHIN 152-3 Spoken Mandarin for Speakers of Other Chinese Dialects II
This is a second course in conversational Mandarin for Cantonese speakers. Students enrolled in this course should already have a good command of Chinese reading and writing. This course is designed for Cantonese speakers who have acquired basic skills in Mandarin phonetics to continue to build vocabulary and gain fluency in Mandarin. CHIN 152 will continue to develop aural comprehension and oral fluency. Contrasts between Mandarin and Cantonese will continue to be made in pronunciation, diction, vocabulary, idiomatic expressions and subtle differences in grammar. 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.

Simon Fraser University 2006 - 2007 Calendar
CHIN 203-3 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 101, 102 or permission of the department. Students with credit for CHIN 203 (taken prior to spring semester 1999) cannot take CHIN 200 for further credit.

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 in the language. Prerequisite: SFU CHIN 200 or permission of the program advisor.

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.

Breadth-Humanities/SocialSciences/Science

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.

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.

CMNS 203-3 Effective Communication
Introduction to techniques and methods of communicating effectively in complex organizations; with the media, government, the public; in the workplace, in local and international business and trade, etc. The challenge of working in meetings, doing research in teams, preparing analytical/technical reports and press statements, managing complex interactive communication processes will be addressed, with special reference to the role of culture, policy, and law, 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, with particular emphasis on the 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; oral tradition; the significance of different systems of writing and numeration; the consequences of print; 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 reception of media. 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 262-3 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 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 290-3 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 295-3 Introduction to Journalism in Canada
An overview of journalism as a social, cultural and political institution in Canadian society. Topics include: news; print and electronic journalism; journalism in the 20th century; 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 297-3 Information Communication
Examination of 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. Students with credit for CMNS 346 (September 1968 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 and research. 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 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 and research. 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 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
so-called growth of mass society in modernity; the modern mass media. Topics discussed include the study of communication and popular culture. Films and documentaries are used as texts for the CMNS 304-4 Communication in Everyday Life communication. Prerequisite: CMNS 110 and 130.

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 436 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 (technology) 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 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. Strongly 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 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 draws 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 is simulated. Required readings focus on 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 – 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 395-0 Communication Practicum I
First semester of work experience in the School of Communication’s Communication Practicum Program. 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 register with the co-op program by the second week of the semester preceding the winter semester of application, and have a minimum GPA of 2.70. Graded as pass/fail (P/F).

CMNS 396-0 Communication Practicum II
Second semester of work experience in the School of Communication Co-operative Education Program. 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 410-4 Media and Ideology
An advanced seminar in 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: SA 270 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 Communication
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 225 and two of CMNS 220, 325, 385.

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 contextual analysis to test media theories 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 can be selected from among current policy issues in local, national and international contexts 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 contexts of economics 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 301. 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 444-4 Political Economy of International Communication
An examination of the domestic and international implications of the development of mass media and telecommunications and the differential impact of the free flow of technology 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 practice (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 sensibilities 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 490, 496, 497, 498, or 481 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 the transfer of 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 evaluative negotiation as forms 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 appreciation of the world-wide scale and 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 content, quality 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-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 concerned 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; WIS 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 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, 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.

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 focussed 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 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 10 hours of directed study may be taken.

CMNS 481-3 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 10 hours of directed study may be taken.

CMNS 482-4 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 10 hours of directed study may be taken.

CMNS 483-5 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 10 hours of directed study may be taken.

CMNS 486-4 Special Topics in Communication
Intensive analysis of a particular topic in the general area of communication and/or attention to the work of a particular writer or school of thought. Prerequisite: depends on topic; published before registration.

CMNS 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 situation related to one of the areas of concentration in communication. Arrangements for field placement and faculty supervision are the responsibility of the student, and enrolment will depend upon the availability of faculty resources in any semester. Prerequisite: 75 credit hours and permission of the school.

CMNS 490-0 Communication Practicum III
The third semester of work experience for students in the School of Communication Co-operative Education Program. Prerequisite: CMNS 396. Graded as pass/failed (P/F).

CMNS 495-0 Communication Practicum IV
The fourth semester of work experience for students in the School of Communication Co-operative Education Program. Prerequisite: CMNS 494. Graded as pass/failed (P/F).

CMNS 496-0 Communication Practicum V
An optional fifth semester of work experience for students in the School of Communication Co-operative Education Program. Prerequisite: CMNS 495. Graded as pass/failed (P/F).

CMNS 497-5 Honors Research Proposal
Preparation for honors research 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 of techniques which underlies 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 classical 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. Includes 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 telecommunication agencies in their historical setting.

CMNS 845-5 Communication, Knowledge Systems and Development
A study of communication in development, with a special emphasis on indigenous knowledge systems, the processes of globalization and cross-cultural communication, and the sustainability of local cultures. 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, soundscape studies, 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 891-0 Co-op Practicum I
CMNS 892-0 Co-op Practicum II
CMNS 895-5 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

CMPT 102-3 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 Event Driven Programming in Visual Basic
Introduction to programming in the event-driven paradigm using the Visual Basic language. Forms, controls, events, menus, objects, subprograms, modular design; decisions and repetition; file and data management; special features. Students who have obtained credit for, or are currently enrolled in a programming course at the 100 or 120 level, or ITEC 240, 241 or 242, may not take CMPT 110 for further credit except with permission of the School of Computing Science. Prerequisite: BC mathematics 12 (or equivalent) or MATH 100 or MATH 110. Quantitative.

CMPT 118-3 Special Topics in Computer and Information Technology
Special topics in computing science which are of current interest to non-computing students. 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 programming course at the 100 or 120 level, or ITEC 240, 241 or 242, may not take CMPT 118 for further credit.

CMPT 120-3 Introduction to Computing Science and Programming I
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, acquire 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. Prerequisite: BC Math 12 or equivalent is recommended. Students with credit for CMPT 101, 102, 103, 104 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 backgrounds 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 algorithmics; 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 or any course numbered CMPT 200 or higher may not take this course for further credit. Quantitative.

CMPT 126-3 Introduction to Computing Science and Programming
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. Prerequisites 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 computational complexity; 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-evaluating 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, 102, 103, 104 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 computational complexity; specification and program correctness; and history of computing science. The course will use a programming language commonly used in Engineering Science. Prerequisites: ENSC 150, 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 logic blocks can be designed and employed to construct a simple computer. Topics covered include: basic Von Neumann computer architecture; an introduction to assembly language; combinational logic design; and sequential logic design. An interactive logic simulation environment will be provided for assignments. Assembly language programming is introduced. This course will interact with ENSC 150 and students cannot take both courses for credit. Students who have taken CMPT 290 cannot take this course for further credit. Prerequisite: MACM 101 and CMPT 120 strongly recommended, or MACM 1 and substantial programming background. Quantitative.

CMPT 165-3 Introduction to Multimedia and the Internet

The goal of this course is to serve as an introduction to the use of computers in everyday life. Concepts underlying the use of multimedia and the Internet are examined, as well as the applications in various fields. 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. Students who have taken CMPT 118 may not take CMPT 165 for further credit except with permission of the School of Computing Science. 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 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 101, 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 programming languages. A hardware description language will be used as a tool to express and work with design concepts. Prerequisite: CMPT/ENSC 150, or 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.

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 transformation 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 will be based on both programming and the expressive use of programs in their case context. Prerequisite: CMPT 125 (or equivalent first programming course). Students with credit for IAT 261 or CMPT 265 and IAT 265 are identical courses; at most one may be taken for credit.

CMPT 275-4 Software Engineering I

Introduction to software engineering techniques used in analysis/design and in software project management. The course centres on a team project involving requirements gathering, object analysis and simple data normalization, use-case-driven user documentation and design followed by implementation and testing. Additionally, there is an introduction to project planning, metrics, quality assurance, configuration management, and people issues. Prerequisite: CMPT 201 or 225, MACM 101, MATH 151.

CMPT 300-3 Operating Systems I

This course aims to give the student an understanding of what a modern operating system is and how the services it provides. It also discusses some basic issues in operating systems and provides solutions. Topics include multiprocessing, process management, memory management, and file systems. Prerequisite: CMPT 201, MACM 101 (or CMPT 205). Students with credit for CMPT 401 may not take CMPT 300 for further credit.

CMPT 301-3 Information Systems Management

Topics include strategic planning and use of information systems, current ad future technologies, technology assimilation, organizational learning, end-user computing, managing projects and people, managing production operations and networks, evaluating performance and benefits, crisis management and disaster recovery, security and control, financial accountability, and proactive management techniques for a changing environment. Prerequisite: CMPT 201 or 225.

CMPT 305-3 Computer Simulation and Modeling

Introduces the techniques for modelling and computer simulation of complex systems. The philosophy and practice of modelling and of Monte Carlo simulation will be reviewed. The student will learn at least one simulation language (SIMULA, SIMSCRIPT, GPSS, CCS or other languages implemented at Simon Fraser University), apply it to a model, and simulate a non-trivial system from his/her area of interest. Prerequisite: CMPT 201 or 225, MACM 101, STAT 270.

CMPT 307-3 Data Structures and Algorithms Analysis and design of data structures for lists, sets, trees, dictionaries, and priority queues. A selection of topics chosen from sorting, memory management, graphs and graph algorithms. Prerequisite: CMPT 201 or 225, MACM 201, MATH 152 and MATH 232.

CMPT 308-3 Computational Complexity

This course introduces students to formal models of computations such as Turing machines and RAMs. Notions of tractability and intractability are discussed both with respect to computability and resource requirements. The relationship of these concepts to logic is also covered. Prerequisite: MACM 201.

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 and MACM 101.

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 curriculum 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 business, government, and service industries. Examination of what are dehumanizing and humanizing parts of...
systems 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 of 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 also be discussed. 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 graphic philosophy, representation 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 MATH 232. Students with credit for CMPT 351 may not take CMPT 361 for further credit.

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 369-3 Principles of Compiler Design
This course is an introduction to compiler design and includes concepts of compiler design and implementation 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 MATH 232. Students with credit for CMPT 351 may not take CMPT 361 for further credit.

CMPT 371-3 Data Communications and Networking
Data 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.

CMPT 379-3 Principles of Compiler Design
This course is an introduction to compiler design and includes concepts of compiler design and implementation 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 MATH 232. Students with credit for CMPT 351 may not take CMPT 361 for further credit.

CMPT 384-3 Symbolic Computing
This course is a comprehensive study of user interface design. Topics include: goals and principles of UI design (systems engineering and human factors), historical perspective, current paradigms (wedge-based, mental model, graphic design, ergonomics, metaphor, constructivist/iterative approach, and visual languages) and their evaluation. Existing tools and packages (dialogue models, event-based systems, prototyping), future paradigms, and the social impact of UI. Prerequisite: CMPT 201 or 225.

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 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 407-3 Computational Complexity
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 vision, optical flow, 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 provides 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 audio programming and sound editing environments. Prerequisite: MATH 152 and one of CMPT 125, 126 or 128 (or permission of instructor).

CMPT 417-3 Intelligent Systems
Intelligent Systems using modern constraint programming and heuristic search methods. A survey of the rapidly advancing technology as applied to scheduling, planning, 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
This course introduces students to the computational 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 421-3 Special Topics in Theoretical Computing Science
Current topics in theoretical computing science depending on faculty and student interest. Prerequisite: CMPT 307.

CMPT 431-3 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 443-3 Special Research Projects
To be individually arranged.

CMPT 461-3 Special Research Projects
To be individually arranged.

CMPT 471-3 Intelligent Systems
Intelligent Systems using modern constraint programming and heuristic search methods. A survey of the rapidly advancing technology as applied to scheduling, planning, 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 473-3 Intelligent Systems
Intelligent Systems using modern constraint programming and heuristic search methods. A survey of the rapidly advancing technology as applied to scheduling, planning, 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 480-3 Theory of Computing Networks/Communication
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 483-3 Special Topics in Theoretical Computing Science
Current topics in theoretical computing science depending on faculty and student interest. Prerequisite: CMPT 307.

CMPT 485-3 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 493-3 Computational Cognitive Architecture
This course introduces students to the computational 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 500-3 Special Topics
To be individually arranged.

CMPT 501-3 Special Topics
To be individually arranged.
CMPT 361, MACM 201 and 316. Students with credit in other research areas will be discussed. Prerequisite: techniques. Applications in virtual reality, human shading, raytracing, radiosity, texture mapping, curves and surfaces, fractals, particle systems, and polymorphic types. Prerequisite: CMPT 383.

CMPT 467-3 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 383.

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 architectures; the architecture 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/gateway. 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 a usable, 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 functional style 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, 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 497-8 Dual Degree Program Capstone Project
Students 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 research project 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 in Graduate or 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 605 and students can not take both courses for credit.

CMPT 506-3 Critical Research Analysis
Advanced seminar series for bioinformatics. Prerequisites: Enrolled in Graduate Diploma in Bioinformatics. This course is identical to MBB 506 and students can not take both courses for credit.

CMPT 601-5 Computing Science Education I
This course will introduce graduate students in Education to the basics of computing science. Emphasis will be placed on the use of microcomputers. Topics will be programming microcomputers; file handling; microcomputer hardware; word processing; graphics; social, economic and legal implications. Prerequisite: graduate status in education. If the student has an adequate background in computing, this course must be replaced by another computing science undergraduate or graduate course.

CMPT 602-5 Computing Science Education II
This course introduces some formal topics in Computing Science to the graduate student in education. Topics include discrete mathematical structures; models of computing; data structures; formal languages and algorithms. Also, methods will be introduced for the design and implementation of large programs using structured modular design. Prerequisite: CMPT 601 or consent of instructor(s).

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. Prerequisite:
Enrolment in Graduate Diploma in Bioinformatics. This course is identical to MBB 611 and students cannot receive credit for both courses.

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 cannot 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. Researchers 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 students cannot 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 an introduction of parallel models (like PRAM, networks), communication models, systolic algorithms, parallel complexity theory, parallel graph theory.

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. This course will cover a variety of algorithmic and computational problems and applications, 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 711-3 Foundations of Data Mining
The student 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 design, implementation, and test of concurrent and reactive systems. The course will proceed in seminar style. Students are required to write their results in a scientific journal format and defend these results. Topics may include: overview of HCI (historical/intellectual, GUI, case studies), interactive systems (design, evaluation, software development), interaction methods (vision, graphic design, touch, speech, etc.), human factors (information processing, capabilities), research fronts (computer supported co-operative work, intelligent systems, hypertext, multimedia, virtual reality, cyberspace). Prerequisites: CMPT 363 or equivalent (instructor discretion). Students who have taken CMPT 873 may not take this course for further credit.
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 the course will 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, stereo vision, matching 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 and 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 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 processing system 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. Prerequisite: 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 methodologies and survey advances in rule-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 CIHRF 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).

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 concurrence control; distributed database systems; 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 VLSI 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 interaction of layout issues and architectural concepts is metal oxide semiconductor technology.

CMPT 853-3 Computer-Aided Design/Design Automation for Digital Systems
This course provides an introduction to the use of CAD tools in the design of digital systems. Emphasis will be given to the use of logic synthesis and physical CAD/DA tools. Students will design and implement circuits using these tools.

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
This course surveys current research in computational complexity and algorithmic theory. Prerequisite: course 880.

CMPT 882-3 Special Topics in Artificial Intelligence
This course surveys current research in artificial intelligence and machine learning. Prerequisite: course 880.

CMPT 884-3 Special Topics in Database Systems
This course surveys current research in database systems and techniques. Prerequisite: course 880.

CMPT 885-3 Special Topics in Computer Architecture
This course surveys current research in computer architecture. Prerequisite: course 880.

CMPT 886-3 Special Topics in Operating Systems
This course surveys current research in operating systems. Prerequisite: course 880.

CMPT 887-3 Special Topics in Hardware Design
This course surveys current research in hardware design. Prerequisite: course 880.

CMPT 888-3 Special Topics in Computer Graphics
This course surveys current research in computer graphics. Prerequisite: course 880.

CMPT 889-3 Special Topics in Interdisciplinary Computing
This course surveys current research in interdisciplinary computing. Prerequisite: course 880.

CMPT 894-3 Directed Reading
This course is designed to provide access to material which is not otherwise available in a scheduled lecture or seminar. The topics covered may be of interest to students in other departments.

CMPT 899-3 Special Topics in Interdisciplinary Studies
This course surveys current research in interdisciplinary studies. Prerequisite: course 880.

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.

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 123-4 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. Co-requisite: 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

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agencies. 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 styles of artistic expression in film. A substantial number of films will be shown during laboratory sessions. 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 135-3 Introduction to Cinema
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.

FPA 137-3 The History and Aesthetics of Cinema I
This course will examine selected developments in cinema from 1945 to the present, with attention to the social, historical and political context in which the films were made. Students with credit for FPA 137 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.

FPA 140-3 Music in the 20th Century
An introductory survey of major historical trends and practices of music in the 20th century 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.

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.

FPA 150-3 Introduction to Acting I
An approach to the elements of acting based on improvisation, with some attention 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 approach in FPA 150 with an increased emphasis on text, leading to scene work. Prerequisite: FPA 150. Students who have completed FPA 152 may not take 151 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 modelled 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 163-3 The History and Aesthetics of Cinema II
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.

FPA 164-4 Visual Art and Culture II
A study of the development of modern dance and the reformation of the ballet from the beginning of the 20th 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 virtual body in cyberspace will be systematically explored. Breath-Humanities.

FPA 167-3 Visual Art and Culture I
An introduction to the visual arts from the 20th 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 virtual body in cyberspace will be systematically explored. Breath-Humanities.

FPA 168-3 Visual Art and Culture II
A study of the visual arts from the 20th 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 virtual body in cyberspace will be systematically explored. Breath-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 materials, and are expected to be involved in work on productions and exhibitions outside of lecture and lab hours. Laboratory 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 220-4 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 is designed to develop technical facility in movement and acquant 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 225-3 Dancing in Cyberspace
This is an on-line course that introduces students to the virtual body in cyberspace and its creative potential. A 3-D human animation software program will be utilized to explore human movement through experientially designed sequences. Aesthetic and socio-technological issues of the human body representation will be addressed. Prerequisite: basic computer skills. May be of particular interest to students in other departments.

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. 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 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 covered in the given semester. Prerequisite: FPA 220 or prior approval.
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, preproduction, development and the shooting and editing of short films. In-class exercises and film screenings will lead to the production of several original films. Each student will be expected to play major creative and technical roles in these productions. Prerequisite: FPA 131, one of FPA 136 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, all of which will eventually become part of 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 is 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 work of major filmmakers in the 1970s, the issue-based work of the eighties, and avant-garde to the lyrical and structural works of the seventies, which form an intensive study of the craft of documentary and experimental filmmaking in Canada. Prerequisite: FPA 136 or 137. Breath-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 short original scripts. Prerequisites: 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. The objective is to provide 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
Theoretical and practical study 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 resources 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 245.

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 multitrack 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 regular courses. The work may be practical (studio), 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
This 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 140 and/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 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 help students develop 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 252-3. Corequisite: FPA 254.

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 context, their 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 basic 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.

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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 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 the 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. Prerequisites: 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 a 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 to the development of 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 The 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 theory 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 relationships to their specific cultural context. Prerequisite: 45 credit hours which must include 6 credits 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 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.

FPA 332-3 Film Production Seminar
Facilitates an in-depth understanding of the organizational aspects of film production, with
emphasize on pre-production planning. The class will study methods of proposal writing, pre-production and production, and production development 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 four-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 function. 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, role preparation, rehearsal, blocking for 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 concepts 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 might 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 not otherwise covered in depth in regular courses. The work may be theoretical, practical, or a combination of the two, depending on the particular topic in a given semester. Prerequisite: FPA 245 and/or prior approval. (Pre-requisite 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 252. 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 deconstruction or adaptation 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 - Presenting 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.
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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 one of FPA 264, 170, or 364.

FPA 365-3 Methods and Concepts: Photo-based Practices

Provides students with training in 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 contemporary context for their related practicum roles as production heads and stage management and design personnel. Issues will be drawn from 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 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 367-3 Seminar in Visual Art I

A seminar course to be taken by all students in FPA 360. It deals with visual art 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 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 368-3 Methods and Concepts: Spatial Presentation

A studio course introducing spatial presentation practices as they relate to practical, conceptual, aesthetic and theoretical natures in contemporary art. Prerequisite: FPA 161 or 170. Students can receive credit for only one of FPA 163, 268 or 368.

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 theoretical natures 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. Prerequisite: FPA 270 and 271 or prior approval. Students who received credit for FPA 372 prior to 2005 may not take FPA 370 for further credit.

FPA 370-3 Production Ensemble I

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 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 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 performance. Prerequisite: FPA 270 or FPA 271 or prior approval. Students with credit for FPA 371 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 needed to create two and 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 and FPA 377 or prior approval. Students with credit for FPA 371 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: FPA 270 or prior approval. Students with credit for FPA 370 prior to 2005 may not take FPA 375 for further credit. Laboratory fee required.

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 and explore the creative 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. Students will be expected to 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 are 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 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 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: 60 credit hours plus 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: 60 credit hours plus 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: 60 credit hours plus 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: 60 credit hours plus 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.

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 416-3 Practices 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, curatoring, writing, or making audio-visual artworks. Prerequisites will vary according to the topic.

FPA 420-4 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 to 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 323, 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. Prerequisites for 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 or video studies with 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. Examples include: work of specific directors or periods; theories of narrativity; ideological analysis; particular aspects of national cinemas, etc. is taught. Prerequisite: FPA 335 or permission of instructor.

FPA 443-3 Gamelan III
Continuation of FPA 343 with emphasis on the techniques 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 346.

FPA 446-3 Music Composition VI
This course is a continuation of FPA 445. 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 focusing on other 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 analysis of the historical and social context of drama in the 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 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 472-3 Production Practicum V
Provides students with the opportunity to learn and practise 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 the roles and responsibilities associated with creating arts productions. 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 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.

CRIM 103-3 Psychological Explanations of Criminal and Deviant Behavior
An introduction to, and critical examination of, biogenetic, psychiatric, and psychological explanations of criminal and deviant behavior. Special attention will be given to the hypothesized links between criminality and genetics, physiology, the endocrine system, mental disorders, personality, moral development, and other forms of social learning. Recommended: PSYC 100 and 102.

CRIM 104-3 Sociological Explanations of Criminal and Deviant Behavior
A survey of some major sociological perspectives on crime and deviance that will include both mainstream and critical theories. These will include: anomie, neutralization, control, group conflict, sub-cultural; ecological, functionalist and critical theories. Critical analysis of the assumptions upon which each theory is based. Examination of the similarities and differences between/among the various explanations. Recommended: SA 150. CRIM 105 is the Writing version of CRIM 104 and students cannot receive credit for both courses. Writing.

CRIM 131-3 Introduction to the Criminal Justice System – A Total System Approach
Introductory analysis of the structure and operation of the Canadian criminal justice system. Examination of the patterns of crime causation; police operations, discretion and decision making; the criminal courts, including sentencing; the corrections system, including correctional institutions and community-based models; the youth justice system. Patterns of contact and conflict between various social groups and the criminal justice system. Breadth-Social Sciences.

CRIM 135-3 Introduction to Canadian Law and Legal Institutions: A Criminal Justice Perspective
A general introduction to the fundamental and competing principles of jurisprudence and to the basic legal institutions of Canada. Prepares students for those law and related courses offered within the School of Criminology and will consider the historical, social and philosophical movements and schools of thought. Consideration of the history and evolution of punishment and penal methods and the historical forces influencing the development, implementation, and modification of these methods. Prerequisite: any 100 level CRIM course.

CRIM 210-3 Law, Youth and Young Offenders
An analysis of the definition and control of youthful misconduct in an historical and contemporary context. Attention is focused upon: the social construction of ‘juvenile delinquency’, the decline of the concept, and the emergence of the concept of the ‘young offender’; the Young Offenders Act and related legislation; the growth of the welfare state and the role of social workers in ‘policing’ youth and families; explanations for the criminal behavior of young persons; state and private sector programs designed to deal with such behavior. Prerequisite: any 100 level CRIM course.

CRIM 213-3 Women and Criminal Justice
This course offers an historical and analytical overview of women and crime, taking into account the role of gender in both criminality and social responses to crime. Specific emphasis will be given to feminist theories. Attention will focus on the specific crimes and patterns of control and punishment. Prerequisite: any 100 level CRIM course.

CRIM 220-3 Research Methods in Criminology
An introduction to criminological research that is intended to develop the student’s research and analytical skills. Specifically, the course will focus on the theory of inquiry, the logic, and structure of criminological inquiry, research design, data gathering, analysis and reporting. Students with credit for CRIM 120 may not take CRIM 220 for further credit. Recommended: any 100 level CRIM course. Quantitative.

CRIM 230-3 Criminal Law
Nature, purpose, scope, sources and basic principles of the criminal law. Study of certain fundamental legal concepts such as mens rea, negligence and strict liability. Analysis of the concept of criminal responsibility in Canada. Critical examination of the legislative policies expressed in the Criminal Code. Study of the basic elements of an offence. The construction of the codes. Examination of the legal principles relating to certain specific crimes and to certain major defences. Impact of Canadian Charter of Rights and Freedoms on the criminal law. Prerequisite: CRIM 135.

CRIM 231-3 Introduction to the Judicial Process
A critical examination and evaluation of the judicial process. An introduction to the criminal courts and the legal profession. The structure and functions of the criminal court system and its relationship to other branches of government. The role of the criminal court judge, prosecutor, lawyer, employee, witness, defendant, expert, etc. Appointment, tenure, removal of judges; the social psychology of the courts; the jury system; plea bargaining; judicial behavior of the courts; the courts and the community; public opinion, attitudes and images of the courts; the mass media and the courts. Prerequisite: CRIM 131. Recommended: CRIM 135.

CRIM 241-3 Introduction to Corrections
An examination of the organization, structure and operation of contemporary Canadian corrections. A consideration of the history and development of provincial and federal correctional systems. The role of sentencing in the correctional process and alternatives to confinement. Discussion of the social organization of correctional institutions, including the inmates, correctional officers, correctional treatment staff and administrators. Parole board decision making and the issues surrounding the re-entry of offenders into the community. Community-based corrections programs and outcomes. Prerequisite: CRIM131.

CRIM 251-3 Introduction to Policing
An examination of the organization and operation of contemporary Canadian policing. Consideration of the history and development of policing in Canada, the role of the police in Canadian society and the police occupation, including recruitment and training. Discussion of police decision making and the exercise of discretion, police powers, and structures of accountability. Managing the police organization. Examination of police-community relations and crime prevention initiatives. Prerequisite: CRIM 131. Students with credit for CRIM 151 may not take CRIM 251 for further credit.

CRIM 261-0 Practicum II
Second semester of work experience in the Criminology Co-operative Education Program. Prerequisite: successful completion of CRIM 161 and 45 credit hours with a minimum CGPA of 2.75.

CRIM 300-3 Current Theories and Perspectives in Criminology
A detailed examination of current theories and perspectives in criminology. The content of the course will change with developments in the area. Students can expect to study biological, psychological and sociological theories and perspectives, as well as those from other relevant disciplines and fields of inquiry (e.g., geography, political science and cultural studies). Prerequisite: CRIM 101.

CRIM 300W-3 Current Theories and Perspectives in Criminology
A detailed examination of current theories and perspectives in criminology. The content of the course will change with developments in the area. Students
can expect to study biological, psychological and sociological theories and perspectives, as well as those from other relevant disciplines and fields of inquiry (e.g. geography, political science and cultural studies). Prerequisite: CRIM 101. Writing.

CRIM 301-3 Crime in Contemporary Society
Contemporary crime, problems and themes pertinent to the field of criminology. Development, character and function of criminology as an academic and professional discipline. Status of criminology in the Canadian context. Historical and social issues of the study of crime, law and justice which will vary depending on instructor. This course may not be taken by students who are majoring or minoring in Criminology. Breath-Social Sciences.

CRIM 302-3 Critical Approaches to Crime and Deviance
Critique of traditional criminological theory and of the conventional approaches to the problems of crime and punishment. Critique of classical and new institutional criminology. Examination of the relationships between crime, class and power. The criminal as a scapegoat for the system. The stereotype of the criminal. Street crime vs. corporation and state crime. Criticism of treatment ideology and techniques. Comparison of conservative and radical criminal policy. The contours of the search for socially responsible treatment and the appropriateness of each technique from the perspective of the social scientist. Prerequisite: CRIM 101.

CRIM 310-3 Young Offenders and Criminal Justice: Advanced Topics
Examines some of the more complex contemporary issues relating to young offenders and justice. For any given semester, the content of the course will reflect current controversies as well as faculty and student interests. Topics may include social control theory and juvenile justice; an assessment of theories of rehabilitation; the legal philosophy of the young offenders legislation and its impact on juvenile justice; and an evaluation of diversion, deinstitutionalization and de-legalization in Canada and the United States. Prerequisite: CRIM 101.

CRIM 311-3 Minorities and the Criminal Justice System
An analysis of political, economic, and ethnic minorities and their relationship with the criminal justice system. Critical analysis of possible discrimination, disharmony or conflict between ethnic and racial minorities and the criminal justice system. Perception and reality, Native Indians, Inuit, Metis, Doukhobor and others and the legal and social norms of the ‘host’ majority. Women and the criminal justice system. Prerequisite: CRIM 101.

CRIM 312-3 Criminological Perspectives on Social Problems
Involves detailed study of forms of deviance that have been commonly defined as constituting ‘social problems.’ Consideration of drug abuse (alcohol, cocaine, heroin and others), suicide, prostitution, obscenity, gambling and abortion. Justifications for present legislative policy and the relationship between the law and the criminal justice system. Prerequisite: CRIM 101.

CRIM 313-3 Specific Types of Crimes
Critical analysis of a specific type of crime with particular emphasis on the nature, the incidence, correlates, control and prevention. Special attention may be given to white collar crime, computer crime, organized crime, violent crimes, political crimes, sexual offence, professional crimes, morality crime, etc. Prerequisite: CRIM 101.

CRIM 314-3 Mental Disorder, Criminality and the Law
Critical examination of the impact of psychiatry and related clinical professions on the criminal justice system. Relationship between institutions of mental health and legal control. The relevance of psychiatric theory and decision-making for the processing of mentally disordered offenders. The role of forensic clinicians in the courts, prisons, mental hospitals and related agencies. Specific issues addressed in this course will include psychosis, treatment, manslaughter, responsibility, fitness to stand trial, prediction of dangerousness, treatment of mentally ill criminals and the penal and therapeutic commitment of the insane. Prerequisite: CRIM 101. Recommended: CRIM 131.

CRIM 315-3 Restorative Justice
An examination and analysis of the principles, assumptions, key concepts and applications of restorative (Transformative) justice. The course will contrast restorative justice with the dominant retributive/punitive model of justice and provide an introduction to a variety of both established and emerging expressions of restorative justice including, victim/offender reconciliation programs, family/group conferencing and circle remedies. Breath-Social Sciences.

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. Problems of pure and applied research. Specific issues of interdisciplinary research. Critical evaluation of the quantitative methods used in certain major criminological studies. 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. Ethics of criminological research. Specific issues of interdisciplinary research. Critical evaluation of qualitative methods used in certain major criminological studies. Prerequisite: CRIM 101; one of CRIM 120 or 220. This course may be taken concurrently with CRIM 320.

CRIM 330-3 Criminal Procedure and Evidence
Critical examination of the right to counsel, the trial, and evidence, including jurisdiction, police powers of search and seizure, the right to counsel and pre-trial and trial procedures. Brief survey 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 331-3 Advanced Criminal Law
An extension of CRIM 230, this course will examine Canadian criminal law in greater depth as well as in comparison with other jurisdictions. Each semester several substantive areas will be analyzed closely. The areas to be examined will be determined by student interest but may include sexual offences, public order offences, mental disorder and the criminal process, property crimes, etc. Prerequisite: CRIM 101 and 230.

CRIM 332-3 Sociology of Law
Introduction to the theory of sociology of law. Law and social structure. Law as a product of a social system and as an instrument of social change. Social functions of the law. Relationship between law and the structure and function of various other social institutions. The process of law-making. Process by which various interests become translated into legal rules. The social reality of the law; the law in action. Social sciences findings into the operation and practice of the law. Critical and feminist perspectives on law. Public knowledge, awareness, opinions and attitudes to the law, sanctions and the criminal justice system. Prerequisite: CRIM 101 and 135.

CRIM 333-3 Women, Law and the State
Provides an in-depth consideration of feminist perspectives on the relationship between 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 relations, sexuality and reproduction, and formal and informal control will be addressed. Prerequisite: CRIM 101; 135. Recommended: CRIM 213.

CRIM 335-3 Human Rights and Civil Liberties
A study of the relationship between the government and the individual. Focus upon 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. A study of the legal, organizational, social, political and economic factors involved in the definition and commission of such crime, 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

CRIM 343-3 Correctional Practice
An in-depth consideration of a range of factors influencing contemporary correctional practice. The fundamental tension between the interests of offenders and the requirements of correctional programs; the context provided by underlying theoretical assumptions about correctional practice and by influences such as public perceptions, politics and the economy. Prerequisite: CRIM 101. Recommended: CRIM 213.

CRIM 345-3 Theoretical Perspectives on Punishment
Examines theories of punishment in Western societies, with a particular emphasis on the ‘revisionist’ literature i.e. that 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 350-3 Techniques of Crime Prevention I
Introduction to the theory of sociology of crime. Techniques of mobilizing community resources for crime prevention. Organizing, implementing and managing citizen efforts to reduce crime. Recruiting citizen assistance, training requirements, establishing
and operating citizen organizations, evaluating results. Organizing programs for reducing criminal opportunity, programs for education, employment and recreation. Operating youth services centers, residential correction, the People's Court and emergency centers. 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. 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, forensic chemistry and questioned documents. Techniques will be illustrated with case studies. Breadth-Social Sciences.

**CRIM 361-0 Practicum III**
Third semester of work experience in the Criminal Justice Co-operative Education Program. 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 her/his duty 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 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 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 look critically at all 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 131.

**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 in conflict with the law. Analysis of certain types of offenses 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 concepts of media, especially books, films and TV. There will be an examination of the type and frequency of crimes associated with displays in the media, either coincidentally or causally, and the perception by and impact upon the public of such relationships (physically and psychologically). In addition, there will be an examination of the nature of political efforts by members of the public to alter this inferred relationship through laws, 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 – 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, Federal Republic of Germany, the former Soviet Union, the People's Republic of China and Japan. Focus on the impact of historical, social, political, religious and cultural factors on the criminal justice process. 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 form, content and philosophical underpinnings of the relevant legislation in British Columbia. Topics include assessing mental incapacity, 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 GER 435 and students cannot take both courses for credit. Students with credit for CRIM 418 when offered as Adult Guardianship Law, and GER 410 when offered as Adult Guardianship Law, may not take CRIM 435 or GER 435 for further credit.

**CRIM 436-3 Corporate Crime and Corporate Regulation: Advanced Topics**
A detailed examination and critical 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 course instructor and will, therefore, vary according to the instructional focus and 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 401. Recommended: CRIM 491.

**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 the criminal law is used in the context of self regulation and how professional associations 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 components 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 approaches 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 decision making, multi-party mediation, and various group 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 crimin lab and require extensive and 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, geneology investigation, facial approximation, crime scene analysis on land, underwater and mass homicide scenarios. Prerequisite: CRIM 101. Students with credit for CRIM 420 in 01-3, 00-3, 99-3, 98-3 or 97-3 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; police leadership; recruiting and training of police officers; the functioning 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 461-0 Practicum IV
Fourth semester of work experience in the Criminology Co-operative Education Program. 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 302 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 criminalological area, under the direction and supervision of at least one faculty member. A research report is required. Prerequisite: CRIM 320, 321 and 330. Written application to the department head must have been made not 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. Recommended: CRIM 490-5.

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 open 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 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 contemporary theory, 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 criminology; 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 functions of bureaucratic agencies in the public sector 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 order; 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 criminological 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 advanced 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 863-3 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 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 roles and functions are examined. The course integrates theory and practice from a case study perspective.

**CRIM 870-3 Directed Readings**
Intensified reading 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 practicum experience supervised by selected faculty members.

**CRIM 885-3 Master's Project**
A semester of full time advanced and intensive practicum experience supervised by selected faculty and justice system personnel. Students will assume a practicum experience supervised by selected faculty members.

**CRIM 889-6 MA Thesis**
**CRIM 899-6 PhD Thesis**

**Undergraduate Semester in Dialogue DIAL**
DIAL 390-5 Undergraduate Semester: Dialogue
The Dialogue component of the Undergraduate Semester at the Centre for 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 dialogues as a developing academic field. The specific focus of the course and the assignments will be linked and interwoven with the current semester's offering of DIAL 391 and 392, which must be taken simultaneously with DIAL 390. Prerequisite: 45 credit hours prior to beginning the Undergraduate Semester at the Centre for Dialogue. Students should apply two semesters before the semester in which they wish to enroll. Corequisites: DIAL 391, 392.

DIAL 391-5 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. Prerequisites: 45 credit hours prior to beginning the Undergraduate Semester at the Centre for Dialogue. Students should apply two semesters before the semester in which they wish to enroll. Corequisites: DIAL 390, 392.

DIAL 392-5 Undergraduate Semester: Final Project
For their final project, each student will produce a manuscript suitable for submission to a major public outlet on a topic relevant to the course focus for that semester. Prerequisite: 45 credit hours prior to beginning the Undergraduate Semester at the Centre for Dialogue. Students should apply two semesters before the semester in which they wish to enroll. Corequisites: DIAL 390, 391.

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 groups and organizations. Emphasis is on interactions 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, 391, 392. Organisations 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 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 103Y-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 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 312-4 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, and are being, exploited through history and how this may evolve in the near to distant future. Students may not use EASC 107 for credit towards earth sciences major or minor program requirements.

**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 PHYS 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 130 with a grade of B or higher). PHYS 126 may be substituted for PHYS 121.

**EASC 206-2 Field Geology**
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 radiogenic isotopes. Prerequisite: EASC 202, CHEM 121, 122 and 126. Quantitative.

**EASC 210-3 Historical Geology**
The study of the evolution of the Earth, the geological time scale, fossils and evolution, stratigraphic concepts, geological history of western Canada. Prerequisite: EASC 101 or GEOG 111. Students with credit for EASC 102 prior to 05-03 may not take this course for credit. Breadth-Social.

**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 paleoenvironmental reconstruction. Prerequisite: STAT 101, 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 credit hours including six credit hours in Earth Sciences and GEOG 213.

**EASC 303W-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 131 (or PHYS 102 with a grade of B or higher). Quantitative.

**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.

**EASC 307-3 Applied Geophysics**
Application, instrumentation and limitations of electrical, electromagnetic, ground penetrating radar and seismic methods for engineering and geoscience applications. Prerequisite: EASC 207. Quantitative.

**EASC 309-3 Global Tectonics**
The study of motion and deformation of the earth's crust and upper mantle on 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 1999 may not take this course for credit.

**EASC 310-3 Paleontology**
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.

**EASC 310W-3 Paleontology**
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.

**EASC 312-3 Stratigraphy**
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. Recommended: EASC 206, 302.

**EASC 313-3 Introduction to Soil and Rock Engineering**
An introduction to the engineering properties and behavior of soil and rock. Laboratory and field measurements 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.

**EASC 314-3 Principles of Glaciology**
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 thermomechanics, dynamics of Greenland and Antarctica, ice cores, subglacial lakes, unstable ice flow, and resource exploitation in glacierized 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.

**EASC 317-3 Global Geophysics**
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 and its use in reconstruction of past plate motions; earthquake seismology and understanding the deep interior, gravity and lithospheric flexure, radiometric dating 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 400-3 Selected Topics in Earth Sciences**
An advanced, in-depth treatment of a specialized area of earth sciences. Prerequisite: to be determined by instructor.

**EASC 401-3 Mineral Deposits**
The petrology and genesis of metalliferous ore deposits; description of classic ore deposits; the occurrence and exploitation of industrial and non-metallic minerals. Prerequisite: EASC 201, 204, 208 and 301.

**EASC 402-3 Sedimentology**
Sediment transport in fluids, the formation, character and classification of internal structures in sediments and paleoenvironmental analysis. Prerequisite: EASC 302.

**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. (2-0-3) 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 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. This involves lectures, seminars and preparation of a term paper and guidebook during the term which serve as background for a 14-18 day field component held shortly after the spring examination period (generally early May). The field component encompasses a fast-paced excursion to a variety of field sites (which change yearly). 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 complete EASC 305 prior to fall 1998 may not take this course for credit.

**EASC 409-3 Rivers: Environments and Engineering**
Fluid mechanics of open channel flow, channel formation and maintenance, sediment transport and deposition, and river engineering case studies.

**Simon Fraser University 2006 - 2007 Calendar**
EASC 418-1 Territory 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 landslides, forest road construction and deactivation. Rock slope stability assessment. Prerequisite: EASC 313, 411 and 413.

EASC 419-1 Forest Harvesting Technology
A field-based course dealing with techniques 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, and 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 course 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 the emplacement of volcanic deposits. 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, extraterrestrial 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 presentation 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 MSc) level by providing students with hands-on experience using hydrogeological 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 session final exams. Note: This course has limited enrolment. Prerequisite: undergraduate courses in physical and chemical hydrogeology (or equivalent) and consent of the department.

EASC 699-4 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 orogenic style will also be discussed. Prerequisite: undergraduate level courses in structural geology and global tectonics, equivalent to EASC 204 and 309 (or permission of the instructor).

EASC 699-5 Advanced 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 geologic mapping, 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 the instructor.

EASC 699-6 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, including 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 699-7 Advanced Metamorphic Petrology
Field relations, nature and origin of metamorphic and metsomatic rocks, graphical treatment and interpretation of mineral assemblages and heat-flow regimes in the framework of global tectonics, with special emphasis on detachment faulting, pressure-temperature-fluid conditions ranging from low-grade rocks through granulites to partial melts.

Simon Fraser University 2006 - 2007 Calendar
Laboratory; petrographic techniques applied to the study of rock suites. Prerequisite: permission of the instructor.

EASC 611-3 Sedimentology
An advanced treatment of topics which may include processes of sedimentation, facies model concepts, applications of ichnology, and depositional environments with an emphasis on silicilastic successions. Course content will be tailored to student interest, but generally will include 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 612-3 Stratigraphy
Stratigraphic concepts of lithostratigraphy, 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 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
Instrumental techniques and applications of electrical, seismic, radar and gravity methods in the exploration for mineral resources and in engineering applications.

EASC 616-3 Fluvial Systems
Fluid mechanics of open channel flow; physical sedimentology and sediment transport in aqeous environments. Prerequisite: appropriate standing in Applied Mathematics and in Physics.

EASC 617-3 Quaternary Geology
Environments of glacial and proglacial deposits. Quaternary stratigraphy and dating methods with emphasis on the Cordillera.

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 conditions 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 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 orogenetic float. 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 study of the paleoenvironmental interpretation of the sedimentary record. Environmental stresses and organism responses will be integrated with conventional sedimentology to develop a better understanding of the inter-relationships between fauna 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 type and fractured aquifers will be included. Computer applications will be emphasized. Prerequisite: undergraduate course in groundwater.

EASC 624-3 Geology of the Canadian Cordillera
The stratigraphy, structure and historical geology of the Canadian Cordillera. Topics will be based on both graduate student areas of interest and on current "hot topics" concerning the orogen. One or more field trips might be conducted if there is sufficient interest and such trips would complement the topics of discussion. 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 complement the topics of discussion. Prerequisite: An undergraduate background that 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
Focuses 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 900 – 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). (P,TL,T,S) 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 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 theory concerning money and income, distribution, social accounts, public finance, international trade, comparative systems, and development and growth. 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 101 cannot take ECON 110 for further credit. Breadth-Social Sciences.

ECON 208-3 History of Economic Thought
A study of the evolution of the main 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.
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. By 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.

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. (lecture/tutorial) Prerequisite: ECON 103 or 200 and ECON 105 or 205; MATH 157; two 200 division ECON or BUEC courses (excluding BUEC 232), 60 credit hours. Students with a minimum grade of A- in both ECON 103 and ECON 105 can take ECON 301 after 30 credit hours and are not required to meet the 200 level ECON or BUEC course requirements. Students seeking permission to register based on ECON 103 and 105 grades must contact the Undergraduate Advisor in Economics. Quantitative.

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. Prerequisite: ECON 301. Students who have taken ECON 383-3 in 1998-9 and 1999-9 cannot take this course for further credit.

ECON 305-5 Intermediate Macroeconomic Theory
Concepts and methods of analysis of macroeconomic variables – consumption, investment, government and foreign trade. Classical and Keynesian models compared; time series analysis and dynamic models. Prerequisite: ECON 103 or 200; ECON 105 or 205; MATH 157; two 200 division ECON or BUEC courses (excluding BUEC 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 BUEC 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 work 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, advertising, 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 role of protection; measurement of the welfare effects of factor movements; multinational enterprises; 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 international reserves and 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 useful contrasts can be made. Prerequisite: ECON 301; 60 credit hours.

ECON 355-4 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. Quantitative.

ECON 355W-4 Economic Development (Writing)
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 378-0 Economics Practicum III
This is the third semester of work experience in the Economics Co-operative Education Program. 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 379-0 Economics Practicum IV
This is the last semester of work experience in the Economics Co-operative Education Program. 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 382-3 Selected Topics in Economics
The subject matter will vary from semester to semester depending upon the interests of faculty and students. Prerequisite: ECON 103 and 105; 60 credit hours.

ECON 383-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours.

ECON 387-3 Selected Topics in Economics
The subject matter will vary from semester to semester. Prerequisite: ECON 103 or 200 and 105 or 205; 60 credit hours.

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: ECON 301.

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 credited 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 asymmetric information. (lecture) Prerequisite: ECON 302 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 301 and 302. Students seeking permission to register based on ECON 301 and 302 grades must contact the Undergraduate Advisor in Economics. Quantitative.

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 302 and 305. 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 409-3 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.

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 rather than attempting to cover a broad survey of industrial organization theories. Prerequisite: ECON 302 and 325.

ECON 426-3 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 (marriage, non-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.

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 (marriage, non-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 both 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.

ECON 446-3 Seminar in International Finance
Focus will vary from semester to semester. Prerequisite: ECON 301, 305 and 343; or permission of the department; 60 credit hours. Quantitative.

ECON 450-3 Seminar in Quantitative Economic History
Focus will vary from semester to semester. Prerequisite: ECON 301 and 305. Quantitative.
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 455-3 Seminar in Economic Development
Topics in economic development. Prerequisite: ECON 302 and 305. Quantitative.

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 478-0 Economics Practicum V
This is an optional semester of work experience in the Economics Co-operative Education Program. 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: ECON 301 and 305; 60 credit hours.

ECON 489-5 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: completion of core MA degree requirements of ECON 802, 807 (or 808), 835, and 836 with a minimum GPA of 3.0; pre- or co-requisite: ECON 435. Joint Honors students may use ECON 301 in place of 302. Quantitative.

ECON 700-0 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
Applications of static optimization techniques, matrix algebra, differentiation 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, stability analysis, 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 and policy, 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 theories, real business cycle models, models of flat money, asset pricing models, endogenous growth models, development traps, macroeconomic complementarities, co-ordination failures, and adaptive behavior in macroeconomic models. Prerequisite: ECON 802. A minimum CGPA of 3.0; pre- or co-requisite: ECON 302. 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 on 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 817.

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 331, 835. Offered once a year. This is the same course as BUS 817.

ECON 818-4 Advanced Topics in Business Finance
Extensions of advanced topics beyond those covered in BUEC 815 and 817. Prerequisite: BUEC 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 contracts. 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 'hands-on' course in implementing 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. These will be presented in the context of ARMA 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 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
Detailed studies 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 of 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 regional 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 855-4 Theories of Economic Development
Characterization of non-growing economies; mechanisms 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 808.

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 public policy 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, tradable emission 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 883, or permission of the instructor.

ECON 865-4 Regional Economic Theory
The theoretical aspects of regional economic development, 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 cycles, 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 835.

ECON 886-4 Industrial Relations

ECON 888-4 The Economics of Legal Relations: IP
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 thearchy state dictatorship.
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 for and
effects of the development of various legal doctrines
will be considered. Topics may include anti-combines
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
externalities; 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 which include the
incentive effects of taxation, tax incidence, tax
evasion, taxation, competition, and fiscal federalism.

ECON 893-4 Introduction to Marxist
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 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 study 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
This course introduces students 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 approaches to empirical research. Cannot
be taken for credit by students with credit for 300 and
400 level education courses. 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 212-3 Mathematical Experience II:
Shape and Space
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
different 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. Illustrations are drawn from published
research in educational psychology. Corequisite:
EDUC 220-3 Quantitative.

EDUC 230-3 Introduction to Philosophy of
Education
This course 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.

EDUC 250-3 Studies in the History of
Education in the Western World
This course will consist of a study of major trends in
educational practice from antiquity to the present.
May be applied towards the certificate in liberal arts.

EDUC 252-4 Introduction to Reflective Practice
Provides opportunities for prospective teachers 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 will be spent
observing in a selection of local schools, and there
will be opportunities to work with children 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.

EDUC 298 – 299 Special Topics
Courses 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 fee 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 grounded 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
abilities, autism spectrum disorder, sensory disabilities
and emotional and behavioral disabilities, interdisciplinary approaches to early
intervention in the home, school and community.
Prerequisite: EDUC 220 or PSYC 250.

EDUC 320-3 Instructional Psychology
This course examines theories of instruction and
research about learning, motivation, individual
differences, and social environments as foundations
for designing instruction. Topics include: models 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 undergirding 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, marking 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 to 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 selfhood, 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 338-3 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 339-0 Practicum 1
First 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.

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.

EDUC 349-0 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.

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 reflective 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 teachers will develop and reflect on a variety of approaches and techniques for teaching and doing theatre in the schools. Prerequisite: 60 credit hours.

EDUC 355-4 Theatre in an Educational Context
This course deals with teaching theatre in an educational context. It will develop knowledge of theatre skills, and introduce students to a variety of approaches and techniques for teaching theatre and doing theatre in the schools. Prerequisite: EDUC 252.

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
This course is intended 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 their own educational milieu. Prerequisite: 60 credit hours.

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. Prerequisite: Completion of at least 60 credits, including three credits in Education.

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 course will be “English-friendly.” 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. They relate to cultural, ethnic, racial, linguistic, religious, economic, and gender differences. 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 – 399 Special Topics
Course will explore major issues of present concern. Subjects to be taught and the exact assignment of credit (2, 3, 4, or 6) 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 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 basic 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 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 observation/teaching sequence of 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 between various topics and representations, and situating secondary mathematics in a broader context, both mathematical and historical. Corequisite: EDUC 415 or appropriate
EDUC 412-4 Design for Learning: Secondary

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 401/402.

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 401/402.

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 401/402.

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 401/402.

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
involving students in the prescribed curriculum.
and plan science learning experiences within a consistent
framework using appropriate instructional
materials and methods. Prerequisite: EDUC 401/402.

EDUC 424-4 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
involving students in the prescribed curriculum.
and plan science learning experiences within a consistent
framework using appropriate instructional
materials and methods. Prerequisite: EDUC 401/402.

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 those 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 Seminar in Teaching Children with
High-Incidence Disabilities

A review of classroom teaching practices that support
learning for children with high-incidence disabilities
e.g., learning disabilities, Attention Deficit Disorder,
modest intellectual disabilities, moderate behavior
problems, giftedness, etc.; introduce to adults within a
consistent framework using appropriate instructional
materials and methods. Prerequisite: EDUC 401/402.

Students who have credit for EDUC 472 prior to the 2001-2
semester cannot take EDUC 412 for further credit.

EDUC 445-4 Legal Context of Teaching

The course is designed to prepare prospective
students, teachers, counselors 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 six hours in Education courses.

EDUC 446-4 Law for the Classroom Teacher

The course provides teachers with the necessary
background understanding of the law and legal
practices required to teach the law-related
dimensions of 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 curricula. Prerequisite: 60 hours of:
credit including six hours in Education courses.

EDUC 448-4 Law in the Curriculum

The justification and practice of law-related
education in the K-12 curriculum are the subjects of this
methodology course. Students 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: EDUC 401/402 or EDUC 446.

EDUC 449-0 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.

EDUC 450-0 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.

EDUC 451-4 Multicultural and Anti-racist

Education

Focuses on developing approaches for multicultural
and anti-racist teaching. Topics include: a diversity of
race, language and culture among learners;
identifying the operation of racism, prejudice and
discrimination in classrooms and schools; becoming
familiar with a variety of approaches such as:
counter-racist teacher training, 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
implementing law-related programs in the 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 401/402.

EDUC 454-4 Teacher Education

The course is designed to prepare prospective
students, teachers, counselors 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 six hours in Education courses.

EDUC 459-0 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.

EDUC 450-0 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.

EDUC 450-0 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.

EDUC 450-0 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.

EDUC 450-0 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.

EDUC 450-0 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.

EDUC 450-0 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.
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
The general objective of this course is to help 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
This course will examine the educational problems entailed in developing human awareness and understanding of the environment. The course will explore environmental issues through a multi-disciplinary approach and will relate 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. Usually offered in summer session only. Prerequisite: EDUC 401/402.

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
This course 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
This course 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
This course focuses primarily on the 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 an educational setting. 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 401/402 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. This course is 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
Focussing 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 473-4 Designs for Learning: Reading
This course offers both theoretical and practical information about teaching reading in primary and early intermediate grades. Prerequisite: EDUC 401/402.

EDUC 473W-4 Designs for Learning: Reading
This course offers both theoretical and practical information about teaching reading in primary and early intermediate grades. 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 475-4 Designs for Learning: Elementary Mathematics
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 475 prior to 2001-2 semester cannot take EDUC 475 for further credit. Quantitative.

EDUC 476-4 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
This course 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
This course is 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, particularly as they apply to alternative environment activities. Prerequisite: EDUC 401/402. Corequisite: EDUC 459.

EDUC 480-4 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 481-4 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 482-8 Designs for Learning: Information Technology
In this course, students 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 the skills, knowledge and understanding that 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 485-8 Designs for Learning: Writing
The course is 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 review, development of curricula. 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 on the goals, values and 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 452, consent of supervising faculty member, and approval of the director of undergraduate programs. Applications are available in the undergraduate programs office. Variable credit hours 3, 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 702-2 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.

EDUC 720 Special Topics
Variable credit hours 3, 4, 5.

EDUC 801-5 Counselling Practicum I
Supervised clinical experience for students enrolled in the MEd or MA Counselling Psychology Program. Graded on a satisfactory/unsatisfactory basis. Prerequisite: EDUC 862, 870 and 874.

EDUC 802-5 Counselling Practicum II
Advanced supervised clinical experience for students enrolled in the MEd or MA Counselling Psychology Program. Graded on a satisfactory/unsatisfactory basis. Prerequisite: EDUC 801.

EDUC 803-5 Educational Program Supervision
The course systematically examines school-based variables amenable to administrative manipulation and associated with student achievement.

EDUC 804-5 Selected Problems in Educational Uses of Technology
EDUC 805-5 Social Development in the School Context
This course involves an examination of theoretical, empirical and practical literature on social and emotional development in young children and its application to education and school settings.

EDUC 806-5 Selected Problems in Higher Education
EDUC 807-5 The Foundations of Action Research
Surveys the philosophical and sociological dimensions, moral and ethical considerations, and empirical findings of action research. Only students admitted by Field Programs are allowed to register for this course.

EDUC 809-5 Graduate Seminar
EDUC 811-5 Fieldwork I
Graded on a satisfactory/unsatisfactory basis.

EDUC 812-5 Fieldwork II
Graded on a satisfactory/unsatisfactory basis.

EDUC 813-5 Organizational Theory and Analyses
This course critically examines organizations in which educational leaders work from different theoretical perspectives, and in light of research evidence. It also critiques several past and current reform initiatives, and explores specific topics in-depth. A central and pervasive question of the course concerns organizational purposes, especially with respect to learning, and how these purposes are served by organizational structures and processes.

EDUC 815-5 Administrative Processes
This course examines the administrative world in which educational leadership occurs, including: administrative ideologies, theories of practice and institutional arrangements; values analysis; and technical fields such as financial, legal and human resources. This is complemented by an introduction to current research findings and to distinct theoretical traditions (e.g. structural-functional, interpretive and 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. technological, 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 Speciality
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
Selections chosen to provide a broad survey of learning disabilities and their identification and remediation in the classroom. Current approaches to classifying and identifying learning disabilities will be analyzed. The role of special education teachers in the development of individualized education plans will be explored. Theories of learning disabilities and their development will be discussed. Prerequisite: EDUC 826.

EDUC 830-5 Implementation of Educational Programs
This course provides an in-depth study of the nature, role, and implications of educational program implementation. The course examines planning and implementation processes with an emphasis on social and political factors that influence program design and implementation. Prerequisite: EDUC 826.

EDUC 831-5 Seminar in Philosophy and Educational Theory
This seminar examines the role of philosophy in the development and practice of education. Critical topics include the nature, scope, and purpose of education; the nature of knowledge; the role of the teacher; and the role of the learner. Prerequisite: EDUC 826.

EDUC 832-5 Social and Moral Philosophy in Education
An in-depth study of the ethical foundations of education. Areas in education where ethical questions arise are examined, and the implications for educational practice are considered. Prerequisite: EDUC 826.

EDUC 833-5 Social and Moral Philosophy in Education: Policy Development and Program Implementation
This course explores the philosophical underpinnings of education policy and program implementation. Topics include the nature of education policy; the role of social and political factors in shaping educational policy; and the implications of policy development for educational practice. Prerequisite: EDUC 826.

EDUC 834-5 Research Basis of Mathematics Education
This is an advanced study of the research base underlying mathematics education. The course examines current research findings and their implications for teaching and learning in mathematics. Prerequisite: EDUC 826.

EDUC 835-5 History of Childhood and Education
This course explores the history of childhood and education from a sociocultural perspective. The course examines the role of childhood in society, the development of childhood as a concept, and the implications of childhood for education. Prerequisite: EDUC 826.

EDUC 836-5 Creative Writing in Education
This course explores the role of creativity in education. The course examines the nature of creativity, the theories of creativity, and the implications of creativity for education. Prerequisite: EDUC 826.

EDUC 837-5 Seminar in Education, Social Philosophy, and Sociological Theory
This seminar examines the role of social and philosophical theories in education. Critical topics include the nature of education; the role of power and authority in education; and the role of the teacher. Prerequisite: EDUC 826.

EDUC 838-5 Judgment in Administrative Decision-making
This course examines the role of decision-making in administrative contexts. The course examines the nature of decisions, the role of administrators in decision-making, and the implications of decision-making for administrative practice. Prerequisite: EDUC 826.

EDUC 839-5 History of Childhood and Education in the Western World
This course explores the history of childhood and education in the Western world. The course examines the development of childhood as a concept, the role of childhood in society, and the implications of childhood for education. Prerequisite: EDUC 826.

EDUC 840-0 Graduate Seminar
This seminar provides an opportunity for advanced study in education. Students will engage in critical analysis of educational issues and develop research projects in their areas of interest. Prerequisite: EDUC 826.

EDUC 841-3 Graduate Seminar
This seminar provides an opportunity for advanced study in education. Students will engage in critical analysis of educational issues and develop research projects in their areas of interest. Prerequisite: EDUC 826.

EDUC 842-5 Sociocultural Perspectives on the Psychology of Development and Education
This course examines the role of sociocultural perspectives in the psychology of development and education. The course examines the role of cultural and social factors in the development of children, and the implications of these factors for education. Prerequisite: EDUC 826.

EDUC 843-5 Embodiment and Curriculum Inquiry
This course examines the role of embodiment in education. The course examines the nature of embodiment, the implications of embodiment for educational practice, and the role of embodiment in the development of educational theory. Prerequisite: EDUC 826.

EDUC 844-5 Research Basis of Mathematics Education
This course examines the research base underlying mathematics education. The course examines current research findings and their implications for teaching and learning in mathematics. Prerequisite: EDUC 826.

EDUC 845-4 Learning Mathematics with Computers
This course examines the role of computers in mathematics education. The course examines the role of computers in the teaching and learning of mathematics, and the implications of these technologies for educational practice. Prerequisite: EDUC 826.

EDUC 846-5 Foundations of Mathematics Education
This course examines the foundations of mathematics education. The course examines the role of mathematics in society, the nature of mathematics, and the implications of mathematics for educational practice. Prerequisite: EDUC 826.

EDUC 847-5 Teaching and Learning Mathematics
This course examines the teaching and learning of mathematics. The course examines the nature of mathematics teaching, the role of students in mathematics learning, and the implications of these factors for educational practice. Prerequisite: EDUC 826.

EDUC 848-5 Ideas and Issues in Aesthetic Education
This course examines the role of aesthetics in education. The course examines the nature of aesthetics, the role of aesthetics in education, and the implications of aesthetics for educational practice. Prerequisite: EDUC 826.

EDUC 849-5 Artistic, Society and Arts Education
This course examines the role of the arts in society and education. The course examines the nature of the arts, the role of the arts in society, and the implications of the arts for educational practice. Prerequisite: EDUC 826.

EDUC 850-5 Creativity and Education
This course examines the role of creativity in education. The course examines the nature of creativity, the role of creativity in education, and the implications of creativity for educational practice. Prerequisite: EDUC 826.

EDUC 851-5 Perspectives on Technology-supported Learning
This course examines the role of technology in education. The course examines the role of technology in the teaching and learning process, and the implications of technology for educational practice. Prerequisite: EDUC 826.

EDUC 852-5 Education and Dramatic Art
This course examines the role of drama in education. The course examines the nature of drama, the role of drama in education, and the implications of drama for educational practice. Prerequisite: EDUC 826.

EDUC 853-5 Tools, Theories and Practices of Computer Supported Collaborative Learning
This course examines the role of computer-supported collaborative learning (CSCL) in education. The course examines the role of CSCL in educational practice, and the implications of CSCL for educational theory and practice. Prerequisite: EDUC 826.

EDUC 854-5 Teachers as Agents of Change
This course examines the role of teachers in educational change. The course examines the role of teachers in the process of educational change, and the implications of this role for educational practice. Prerequisite: EDUC 826.

EDUC 855-5 Multicultural and Race Relations Education: Policy Development and Program Implementation
This course examines the role of multicultural and race relations education in policy development and program implementation. The course examines the role of multicultural and race relations education in policy development, and the implications of this role for educational practice. Prerequisite: EDUC 826.

EDUC 856-5 Sociocultural Perspectives on Education and Identity
This course examines the role of sociocultural perspectives in education and identity. The course examines the role of sociocultural perspectives in the construction of identity, and the implications of these perspectives for educational practice. Prerequisite: EDUC 826.

EDUC 857-5 Issues and Topics in Environmental Education
This course examines the role of environmental education in policy development and program implementation. The course examines the role of environmental education in policy development, and the implications of this role for educational practice. Prerequisite: EDUC 826.

EDUC 858-5 Contemporary Research and Classroom Practices in French Immersion Education
This course examines the role of research and classroom practices in French immersion education. The course examines the role of research and classroom practices in French immersion education, and the implications of these practices for educational practice. Prerequisite: EDUC 826.
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 Data 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 867-5 Qualitative Methods in Educational Research  
This course introduces students to qualitative research in education and examines topics such as identifying problems, conceptual frameworks, coding, data analysis, drawing interpretations, and constructing arguments. Prerequisite: EDUC 864 (except for MED in Educational Practice).

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 870-5 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 871-5 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 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 critiqued. Counselling decision-making, counselling effectiveness, and professionalism in counselling are also considered. Prerequisite: consent of the instructor.

EDUC 876-5 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 purporting to increase learners’ success in learning. The issues examined include the historical context, problems and prospects of cognitive interventions.

EDUC 877-5 Contemporary School Counselling  
An examination of contemporary approaches to school counselling. Program development, consultation skills, counselling interventions, and ethics of school counselling are considered.

EDUC 878-5 Group Counselling  
An examination of contemporary approaches to group counselling. Prerequisite: EDUC 874.

EDUC 880-2.5 Master's Project (Completion)  
The project is a study that may take a variety of different forms including a survey, case study, extended essay, curriculum development project or dissertation; 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 given on a satisfactory/unsatisfactory basis.

EDUC 884-2.5 MEd Comprehensive Examination (Completion)  
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 workplace learning; providing a source for designing 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 design for observational and 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)  
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 – 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 930-4 Considering the Future of Learning Communities
EDUC 931-4 Group and Organizational Learning Technologies
EDUC 932-4 Learner-Centred Design
EDUC 940-5 Doctoral Seminar in Mathematics Education
EDUC 942-5 Contemporary Theories and Methodologies in Mathematics Education
EDUC 944-5 Mathematical Learning and Thinking: Historical, Philosophical, and Psychological Dimensions
EDUC 945-5 Doctoral Seminar in Arts Education
EDUC 946-5 Doctoral Seminar in Mathematics Education
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 Leadership, Accountability and the Public Interest
EDUC 963-5 Approaches to Problematizing
EDUC 964-5 Seminar in Educational Theory
EDUC 970-4 Systems and Paradigms in Educational Psychology
EDUC 971-4 Advanced Topics in Educational Psychology
EDUC 972-4 Colloquium in Psychology of Education
EDUC 973-5 Advanced Quantitative Methods in Educational Research
EDUC 983-5 Doctoral Comprehensive Examination
EDUC 984-5 Field Studies in Educational Practice
EDPR 377
EDPR 393 Special Topics
EDPR 394 Field Based Studies in Curriculum Development
EDPR 414 – 417 Field Based Studies in Educational Practice
EDPR 418 – 421 Group Field Studies in Selected Professional Topics
EDPR 422 – 425 Field Based Studies in Educational Practice
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. Courses may be offered on a pass/withdrawal basis. Prerequisite: EDUC 405 or special permission of the instructor. Variable credit hours 2, 3, 4, 5.

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
These courses involve 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.

EDPR 541 – 550 Advanced Field Studies in Curriculum Development I
In this course, students read for, plan and develop a conceptual framework for action that connects theme studies to the individual’s professional context. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 551 – 560 Advanced Field Studies in Curriculum Development II
In this course, students read for, plan and develop a conceptual framework for action that connects theme studies to the individual’s professional context. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 561 – 570 Advanced Field Studies in Educational Practice I
In this course, students implement plans for action, conduct classroom inquiry, and document their individual learning related to the theme of the course sequence. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 571 – 580 Advanced Field Studies in Educational Practice II
In these courses, students implement plans for action, conduct classroom inquiry, and document their individual learning related to the theme of the course sequence. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 581 – 590 Advanced Field Studies in Collaborative Inquiry I
In these courses, students work in groups to investigate topics of mutual interest within the diploma theme, with an emphasis on their contributions to both the cohort learning group and the individual’s broader educational community. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.

EDPR 591 – 599 Advanced Field Studies in Collaborative Inquiry II
In this course, students work in groups to investigate topics of mutual interest within the diploma theme, with an emphasis on their contributions to both the cohort learning group and the individual’s broader educational community. Graded on a satisfactory/unsatisfactory basis. Variable credit hours 2, 3, 4, 5.
ENSC 230-4 Introduction to Mechanical Design
This course presents the elements and principles involved in design and analysis of basic mechanical structures and mechanisms. Mechanical elements such as beams, 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 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 380 may not take CMPT 250 for further credit. Quantitative.

ENSC 263-3 Special Topics in Engineering Science
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 264-4 Special Topics in Engineering Science
Prerequisite: permission of the undergraduate curriculum chair.

ENSC 295-0 Industrial Internship II
Second four month internship in industry. Credit is awarded as in ENSC 195. Prerequisite: ENSC 195 or 196.

ENSC 296-0 Special Internship II
Four month internship in industry or university research environment. Credit is awarded as in ENSC 195. 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 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 responses; resonant and bandpass circuits; 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; techniques for modulation and demodulation; frequency division multiplexing; baseband digital communication; time division and multiplexing; an introduction to basic digital modulation schemes such as BPSK, FSK and QPSK. Laboratory work is included in this course. Prerequisites: ENSC 281 or 380 or 382, and STAT 270.

ENSC 328-1 Random Processes in Engineering
An introduction to continuous-valued random processes, including first and second order statistics. Topics: definitions of random processes taking complex values in one dimension: 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 330-4 Engineering Materials
An introductory course in materials science which covers materials 0 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 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 151 and 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 response 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 101, 250 or ENSC 250 or CMPT 290. ENSC 151 is highly recommended. Students with credit for ENSC 385 cannot take this course for further credit.

ENSC 353-3 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 include: 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 208.

ENSC 372-0 Biomedical Instrumentation
Instrumentation techniques for measuring and communicating 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 320, ENSC 380 and KIN 308.

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 acquired. Prerequisite: ENSC 220, 225. Recommended: ENSC 224.

ENSC 376-4 Introduction to Optical Engineering and Design
In this course students learn basic of designing optical instruments. Lectures cover the principles of operation of optical devices using linear (ray) optics and Fourier optics as well as apical metrology. Hands-on practice is provided by extensive laboratory activities. Prerequisite: PHYS 121, MATH 254.

ENSC 380-3 Linear Systems
The objectives of this course are to cover the modeling and analysis of continuous and discrete signals using linear techniques. Topics covered include: a review of Laplace transforms; methods for the basic modelling of physical systems; discrete and continuous convolution; impulse and step response; transfer functions and filtering; the continuous Fourier transform and its relationship to the Laplace transform; frequency response and Bode plots; sampling; the Z-transform. Prerequisite: ENSC 125 or 220, ENSC 320 (may be taken concurrently), and MATH 310. Students with credit for ENSC 281 or 382 cannot take this course for further credit. Corequisite: ENSC 320.

ENSC 383-4 Feedback Control Systems
This course is an introduction to the analysis, design, and applications of continuous time linear control systems. Topics includes transfer function representation of open and closed loop systems, time domain specifications and steady state error, sensitivity analysis, time and frequency response, and stability criteria. It includes a treatment of methods for the analysis of control systems based on the root locus, Bode plots and Nyquist criterion, and their use in the design of PID, and lead-lag
compensation. Lab work is included in this course. Prerequisite: ENSC 281 or 380.

ENSC 387-4 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: ENSC 151, 225, 351, and any two courses from ENSC 325, 327, 383 and 387. Students with credit for ENSC 340 cannot take ENSC 440 for further credit. Corequisite: ENSC 305.

ENSC 440-4 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: ENSC 151, 225, 351, and any two courses from ENSC 325, 327, 383 and 387. Corequisite: ENSC 305. Students with credit for ENSC 340 cannot take ENSC 440 for further credit. Writing.

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. SoC design techniques and applications will be covered. Basic topics will include: CMOS technology and circuit layout rules; combinational and sequential logic; logic simulation; systems design; design for verification and testability; and embedded-processor 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 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
This course is for 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 patho-physiology component, an 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 techniques, (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 biomedial 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 unidimensional signals such as 2D/3D medical images are covered. Students will become proficient in several basic tools used in signal processing by looking at their multidimensional

ENSC 482-4 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 490-0 Special Internship III
Four month internship in industry or university research environment. Approved entrepreneurial projects will also be accepted. Credit is awarded as in ENSC 195. Prerequisite: ENSC 295 or 296, a minimum of 75 credit hours of study and approval of internship co-ordinator required.

ENSC 400-4 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 401-4 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 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.
ENSC 381-4 Techniques of Digital Communication
Physical layer of a digital communication system. Issues in constructing and using integrated CAD/CAM in a production environment will be discussed. Examples include: digital communications, speech recognition, image processing, and control in chemical and manufacturing processes. Students must attend regularly and be prepared to discuss lecture material.

Prerequisite: ENSC 222 or ENSC 230.

ENSC 385-5 Cryptography
The course is intended for students wishing to pursue 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 392-2 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 393-3 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 394-4 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 395-4 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, epitaxy), etching (wet, plasma, wetting, 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 transistor operation and is also an optional course for those in engineering physics. Prerequisite: ENSC 222 or 225.

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, epitaxy), 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 transistor operation and is also an optional course for those in engineering physics. Prerequisite: ENSC 222 or 225.

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. Prerequisite: 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 for the thesis for ENSC 499, Graduate students must be on a pass/fail basis, but recognition will be given to outstanding work. Prerequisite: ENSC 498.

ENSC 800-0 Graduate Seminar in Engineering Science
A seminar series presented by graduate students, university researchers, government or industrial labs on recent developments in engineering science. All full time graduate students are required to register for this course in fall and spring semesters. Grading will be restricted to satisfactory/unsatisfactory (S/U), and to attain a satisfactory grade, students need to attend at least two thirds of the seminars. ENSC 801-3 Linear Systems Theory
State-space analysis of infinite dimensional continuous and discrete time linear systems. Linear vector spaces, linear operators, normed linear spaces, and inner product spaces. Fundamentals of matrix algebra, generalized inverses, solution of Ax=Y, ABx=Y, least square and recursive least square estimation, induced norm and matrix measures, functions of a square matrix, Cayley-Hamilton and Sylvester’s theorems, Singular Value Decomposition (SVD) with applications. A computer aided representation of linear systems, state-space formulation, solution of the state equation and determination of the system’s response. Controllability, observability, duality, canonical forms, and minimal realization concepts. Prerequisite: ENSC 381. 

ENSC 802-3 Stochastic Systems
The application of theories in probability, random variables and stochastic processes in the analysis and modelling of engineering systems. Topics include: an introduction to 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 estimation theory. Areas of application include digital communications, speech and image processing, control, radar and Monte Carlo simulations. Prerequisite: ENSC 381.

ENSC 805-3 Techniques of Digital Communications
This course covers the fundamental techniques used in the physical layer of a digital communication system. Topics include: modulation and demodulation, error detection and correction, spread spectrum, pulse compression, and spread spectrum systems. Prerequisite: ENSC 381.
system. The main topics are as follow: digital modulation, including complex baseband representations, the concept of the signal space, optimal demodulation, bit error probability analysis, as well as error 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 general coding and eye diagrams. The emphasis may vary slightly in different offerings. Prerequisite: ENSC 802 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 operation over a physical multiple-access channel; signal generation, synchronization, modulation, and error-correcting coding of spread spectrum multiple access, known as CDMA (Code Division Multiple Access), signals. It relates these functions to link and network layer properties involving cellular coverage, Erlang capacity, and network control. Prerequisite: ENSC 802 or permission of instructor.

ENSC 810-3 Statistical Signal Processing
Processing techniques for continous 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 estimation. 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 course in multirate processing. Topics include: sampling rate conversion; multirate and polyphase representations and implementations; multirate filter banks and the discrete wavelet transform; modulated filter banks. Applications are drawn from audio, speech, image, and data coders. Prerequisite: ENSC 429 or equivalent.

ENSC 820-3 Engineering Management for Development Projects
This course focuses on the management and reporting of technical development projects. In seminars and workshops it builds 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 emphasizes techniques 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 MASc 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 designs, 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 analyse modern communications networks. The main topics are as follow: practical techniques for the design and performance analysis of data communucation networks; performance analysis of error control, flow and congestion control, and routing in the network. Traffic processes, queueing, fluid systems. Gate Algorithm, and custom and customized integrated circuits. CAD tools. Students are required to complete a project.

ENSC 854-3 Network Protocols and Performance
This course covers the techniques needed to understand and analyse modern communications networks. The main topics are as follow: practical techniques for the design and performance analysis of data communucation networks; performance analysis of error control, flow and congestion control, and routing in the network. Traffic processes, queueing, fluid systems. Gate Algorithm, and custom and customized integrated circuits. CAD tools. Students are required to complete a project.

ENSC 855-3 Modern Semiconductor Devices
This course will present the physical concepts required to participate in (or gain 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, the depletion approximation and beyond, heterostructures, band line-ups, lattice matched heterostructures n strain as design parameter, charge recombination, operating principles of modern semiconductor devices such as SiGe or III-V HBTs, MFSFETs/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 semiconductor 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 PECVD.

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 circuits are discussed. Most of the material will be presented through a series of case studies. The main topics are: CMOS technology, cell library design, memory design, memory circuits (SRAM, DRAM, ROM, PROM, arithmetic unit design), and embedded processor design. Parallelism, pipelining, and clocking are also discussed. Prerequisite: ENSC 450 or equivalent, or permission of the instructor.

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 of vector quantization, prediction, transforms, analysis

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by synthesis, and model based coding are then discussed. Prerequisite: ENSC 802 or equivalent.

**ENSC 883-3 Optimal Control Theory**
Review 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, Hamilton-Jacobi-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 887-3 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 does it 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 design optimization and control for computer animation. The course involves a substantial project which exposes students to practical and implementation 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 889-3 3D Object Representation and Solid Modelling**

**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 893-3 Special Topics I**
**ENSC 895-3 Special Topics II**
**ENSC 896-1.5 MEng Project**
**ENSC 897-3 MEng Project**
**ENSC 886-6 MASc Thesis**
**ENSC 899-6 PhD Thesis**

**English ENGL**
**Faculty of Arts and Social Sciences**

**ENGL 101-3 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. Breadth-Humanities.

**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 102-3 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. 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 103-3 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. 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.

**ENGL 104-3 Introduction to Prose Genres**
The literary study of a variety of prose genres, such as the essay, biography, autobiography, travel narrative, and journalistic writing. Works may 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 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 105-3 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. 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 199-3 Introduction to University Writing**
An introduction to reading and writing in the academic disciplines. Writing.

**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 202-3 Early Modern Literature**
A survey of the literature of the period from 1485 to Milton. Prerequisite: two 100 division English courses. May include writing from North America. Prerequisite: two 100 division English courses. Breadth-Humanities.

**ENGL 205-3 Eighteenth Century Literature (1685-1800)**
The study of literary works from the Restoration and eighteenth century. 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. May include some writing from North America. 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: ENGL 311 and 313 or ENGL 312. 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 347-4 Studies in American Literature before 1900
The study of selected works of American literature written before 1900. This course may survey a particular era or topic, and may be organized by various critical issues or approaches. Prerequisite: two 100 division English courses, and two 200 division English courses. Students with credit for ENGL 344 or 345 may not take this course for further credit.

ENGL 349-4 Studies in American Literature since 1900
Addresses issues in American literature. May be organized by various critical issues or approaches. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 354-4 Studies in Canadian Literature before 1920
The study of selected works of Canadian literature written before 1920. Prerequisite: two 100 division English courses, and two 200 division English courses. Students with credit for ENGL 356 or 358 may not take this course for further credit.

ENGL 357-4 Studies in Canadian Literature since 1920
The study of selected works of Canadian literature written after 1920. Prerequisite: two 100 division English courses, and two 200 division English courses. Students with credit for ENGL 356 may not take this course for further credit.

ENGL 359-4 Studies in the Literature of British Columbia
The study of selected works of British Columbian literature. Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 364-4 Literary Criticism: History, Theory and Practice
The study and application of select literary theories. Prerequisite: two 100 division English courses, and two 200 division English courses. Recommended: ENGL 216.

ENGL 371-4 Writing: Theory and Practice
Students will engage in theoretically informed practice of writing in various non-academic genres. Emphasis will be placed on the kinds of writing that students are likely to use after graduation. Prerequisite: two 100 division English courses, and two 200 division English courses. Recommended: one of English 199, 210, or 214.

ENGL 372-4 Creative Writing
A seminar-workshop in creative writing for students who have an interest and some writing experience in poetry, fiction, or drama. The emphasis of the course may vary from semester to semester. Prerequisite: two 100 division English courses and two 200 division English courses. Particular prerequisites: Permission of the department is required. Students may take more than one course in creative writing but may count only one of them toward English honors or a major or minor in English.

ENGL 375-4 Studies in Rhetoric
Advanced study in the theory and/or history of rhetoric. Prerequisite: two 100 division English courses, and two 200 division English courses. Recommended: one of English 199, 210, or 214.

ENGL 376-4 Special Studies
Prerequisite: two 100 division English courses, and two 200 division English courses.

ENGL 383-4 Studies in Popular Literature and Culture
A study of popular literature and its cultural contexts. May be defined by genre, author, period, or critical approach. Prerequisite: two 100 division English courses, and two 200 division English courses. Students with credit for ENGL 363 may not take this course for further credit.

ENGL 387-4 Studies in Children's Literature
The study of selected works 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/or a variety of cultures. Designed for non-English majors. Prerequisite: 60 credit hours. This course may not be counted for credit toward an English major or minor. Breadth-Humanities.

ENGL 400-4 Advanced Old English
Intensive study of several Old English poems. Prerequisite: ENGL 300. Recommended for English honors, major, joint major and minor students.

ENGL 400W-4 Advanced Old English
Intensive study of several Old English poems. Prerequisite: ENGL 300. Recommended for English honors, major, joint major and minor students. Writing.

ENGL 404-4 Topics in Medieval Literature
Advanced study of specific aspects of Medieval literature. May be defined by author, genre, or critical approach. Prerequisite: ENGL 304 or 306. Recommended for English honors, major, joint major and minor students.

ENGL 404W-4 Topics in Medieval Literature
Advanced study of specific aspects of Medieval literature. May be defined by author, genre, or critical approach. Prerequisite: ENGL 304 or 306. Recommended for English honors, major, joint major and minor students. Writing.

ENGL 407-4 Topics in Early English Drama
The study of selected dramatic works written in English prior to the Reformation. May be organized by author, genre, or critical approach. Does not include Shakespeare. Prerequisite: one of ENGL 304, 306, 310, 311, or 313. Recommended for English honors, major, joint major and minor students.

ENGL 407W-4 Topics in Early English Drama
The study of selected dramatic works written in English prior to the Reformation. May be organized by author, genre, or critical approach. Does not include Shakespeare. Prerequisite: one of ENGL 304, 306, 310, 311, or 313. Recommended for English honors, major, joint major and minor students. Writing.

ENGL 410-4 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. Recommended for English honors, major, joint major and minor students.

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 416-4 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.

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 420-4 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.

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 427-4 Topics in the Romantic Period
Addresses specific issues in romantic literature in English. May be organized by author, genre, or critical approach. Prerequisite: ENGL 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 434-4 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.

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 435-4 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.

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 436-4 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.

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 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 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 449-4 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 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 347. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 453-4 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 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 454-4 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 300 division English course. Reserved for English honors, major, joint major and minor students.

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 300 division English course. Reserved for English honors, major, joint major and minor students. Writing.

ENGL 455-4 Topics in Canadian Literature
Advanced seminar in Canadian literature. 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 455W-4 Topics in Canadian Literature
Advanced seminar in Canadian literature. 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 461-0 Practicum I
First semester of work experience in the English Co-operative Education Program. 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 the employment semester.

ENGL 462-0 Practicum II
Second semester of work experience in the English Co-operative Education Program. Prerequisite:
successful completion of ENGL 461 and normally 45
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 463-0 Practicum III
Third semester of work experience in the English Co-operative Education Program. 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 464-0 Practicum IV
Fourth semester of work experience in the English Co-operative Education Program. 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 465-4 Topics in Critical Theory
Advanced seminar in literary theory. Prerequisite:
ENGL 364. Reserved for English honors, major, joint
major and minor students.

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 466-4 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.

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.

ENGL 469-4 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.

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 482-4 Topics in Cultural Studies
Investigates interconnections between literature and
culture through the study of selected texts.
Prerequisite: one 300 division English course.
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. The historical and geographical focus of the course will vary.

ENGL 844-4 Studies in Aboriginal Literature
Examines selected Aboriginal writings in a variety of forms and contexts, 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 regional 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
Examines 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 Pre-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 Pre-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.

ENGL 890-4 MA Thesis
ENGL 891-4 MA Paper/Project
ENGL 892-4 PhD Field Exam One
ENGL 893-4 PhD Field Exam Two
ENGL 899-5 PhD Thesis

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 380-0 Practicum I
First semester of work experience in the Environmental Science Co-operative Education Program. Prerequisite: acceptance in the science co-operative education program.

EVSC 381-0 Practicum II
Second semester of work experience in the Environmental Science Co-operative Education Program. 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 topics in the field of environmental science. The course is required by all students interested in a career in environmental science.

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 productive 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 Info. Technology/Organiz.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 is 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 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
Specific course outlines and bibliographies must receive prior approval of the graduate program committee.

MBA 696-5 The Canadian Economy
An investigation of Canadian economic issues and problems, with particular emphasis on their impact on business decisions.

MBA 691-5 Business, Government and Society
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.

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
Explorations EXPL Faculty of Arts and Social Sciences
EXPL 110-3 Organizing Society
An interdisciplinary introduction to the analysis of social organisation, with specific attention to identity, institutions and environment. Corequisite: EXPL 120. Enrollment restricted to students accepted in the Explorations program.

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. Corequisite: EXPL 110. Enrollment restricted to students accepted in the Explorations program.

EXPL 130-3 Global Development: Issues and Patterns
An interdisciplinary survey of issues and patterns in development across the globe since European industrialisation. Enrollment restricted to students accepted in the Explorations program.

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. Enrollment restricted to students accepted in 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. Enrollment restricted to students accepted in the Explorations program.

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.

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. Corequisite: EXPL 150. Enrollment restricted to students accepted in the Explorations program.

EXPL 310-3 Selected Topic I
Provides an in-depth, interdisciplinary investigation of a selected thematic, 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 six credit hours at the 200 division; 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 thematic, 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 six credit hours at the 200 division; 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 ethnographic sources. An additional focus will be on gender as it influences perspectives. Prerequisite: 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 matters, the impact of federal government policies, 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 content of aboriginal 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, ethnosciences, 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 from this course do not count towards the 120 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 mathematical background in preparation for SFU Q-designated courses. Also recommended for students who wish to refresh their 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. A combination of lectures and small group seminars will allow students to develop math study skills and build confidence in their math abilities, and to learn how understanding mathematics is both one of the keys to mastering other disciplines, and useful in everyday situations. Enrolment priority is given to students who have not yet met the quantitative proficiency prerequisite of a Q-designated course. Credits from this course do not count towards the 120 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 (or 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 185-0 Practicum
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 for placement. 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 210) or higher (or their equivalents).

FREN 199-3 Writing French I: Spelling and Grammar
An alternative to FREN 211 for francophone students who need practice in elementary grammar, composition and spelling. Offered as a correspondence course only. Prerequisite: fluency in French. Students will be accepted only after an interview (which may be by telephone) with a faculty member in the Department of French. Students may not get credit for both FREN 201 or 211 and 199.

FREN 210-3 Intermediate French I
Designed to consolidate and expand knowledge of the language. Strong emphasis on oral expression and listening comprehension to develop communicative skills. Instruction in class and in lab. Prerequisite: FREN 101 or 122 or grade 12 French (or equivalent based on placement test). May not be taken by students from French immersion, programme cadre or IB students. Students with credit for FREN 151 may not take this course for further credit.

FREN 211-3 Intermediate French II
Designed to improve listening and reading comprehension. Emphasis on accuracy in oral and written communication. Instruction in class and in lab. Prerequisite: grade 12 French with a grade of A or FREN 151 or 210 (or equivalent placement test). May not be taken by FREN 212 or 216 students. Students with credit for FREN 201 may not take this course for further credit.

FREN 212-3 French for Immersion Program Students
Designed for French immersion program students who wish to refine their oral and written language competence. Instruction in class and in lab. 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 219. 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 215. 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 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, in lab 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 223-3 Topics in French Language
The topic will vary: French for Business, 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, 222, 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. The 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 285-0 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 for placement. 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 299-3 Writing French II: Intermediate Composition
An intermediate composition course to help students with the techniques of writing in French. The course will be conducted in French; the object is to acquire a reading facility and a critical appreciation of modern French literature. Prerequisite: FREN 206 or 222, or, with a grade of A, FREN 301. Breadth-Humanities.

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 301-3 Advanced French Composition
A writing course to improve organization and argumentation, paragraph structures and lexical...
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accuracy. Instruction in class and online. Prerequisite: FREN 206 or 222, or, with a grade of A, FREN 202 or 221.

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 340-1 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 II
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 385-0 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. 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, translation theory to 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 416-3 French Applied Linguistics
This course studies the applications of various branches of linguistics to the problem of second language acquisition and the teaching of French as a second language. Prerequisite: FREN 301 and 370. Students with credit for FREN 310 may not take this course for further credit.

FREN 423-3 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 424-3 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 485-0 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. 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 readings in selected topics. May only be taken during the last 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 long term research project.

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 898-6 MA Thesis
FREN 999-6 Field Examination

Gender Studies GDST Faculty of Arts and Social Sciences

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 Genders
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, transgender, 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 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 spatial aspects of economic, cultural and political development, landscape and resource study. 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 climate and geological 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 I
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 354 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.

GEOG 265-3 Geography of British Columbia
An examination of the physical landscape, the migration process, resource exploitation and the development of the settlement patterns. Prerequisite: at least nine credit hours.
GEOG 300-4 Possible Worlds: The Rise of Geographical Thinking
A survey of geographical thinking within the Western tradition, from the Greeks to modern times. This course looks at mainstream and eccentric, to describe and explain the world (places, peoples, environments, Earth). Extensive use of primary texts. Prerequisite: completion of 45 credit hours.

GEOG 301-4 Geographic Ideas and Methodology
A study of contemporary geographical concepts in historical perspective. The course will examine traditional approaches to the subject matter of geography, giving particular attention to present day methodological debate and foci of interest.
Prerequisite: completion of 30 credit hours, including 15 in geography.

GEOG 302-0 Geography Practicum I
This is the first semester of work experience in a co-operative education program available to students who plan to pursue a career in geography or related areas.
Prerequisite: completion of the requirement for acceptance into the Science and Environment co-operative education program. Students in the BA program and the BSc program should apply to the Science and Environment co-operative education program. Applications are due by the end of the third week of the preceding semester.

GEOG 303-0 Geography Practicum II
This is the second semester of work experience in the Geography Co-operative Education Program.
Prerequisite: GEOG 302 and acceptance by the Science and Environment co-operative education program. Students should apply to a co-op coordinator in the Science and Environment co-op program by the end of the third week of the preceding semester.

GEOG 310-4 Physical Geography Field Course
A twelve-day field camp with a focus on various measuring, surveying, recording and mapping skills in branches of physical geography. A selected project will be completed either by a team or by an individual. Field camp locations will vary from year to year. The camp will be held immediately following the end of final examinations in April. Prerequisite: GEOG 213 and one of GEOG 214 or 215. Pre- or Co-requisite: one of GEOG 311, 313, 314, 315 or 317.

GEOG 311-4 Hydrology I
Introduction to the hydrologic cycle, with an emphasis on the Columbia River. The study of water and its properties: description and analysis of the processes of water movement and storage; effects of climatic variations and land use on the hydrologic cycle.
Prerequisite: GEOG 213 or 214, STAT 101 or 270 or 261 or GEOG 251, PHYS 100 or 101 or 120; or permission of the instructor.
Quantitative.

GEOG 312-4 Geography of Natural Hazards
An introduction to the occurrence and origin of natural hazards such as volcanic eruptions, landslides, etc. Interaction between the relevant natural processes and society will be examined, as well as prediction of natural events and the amelioration of the effects of such events within different cultural contexts.
Prerequisite: GEOG 111 or EASC 101. Students with credit for GEOG 212 may not take this course for further credit.

GEOG 313-4 Geomorphology II

GEOG 314-4 Climatology
An introduction to atmospheric science with emphasis on processes in the boundary layer; examination of the radiation, energy and water balances; description and analysis of heat and mass transfer.
Prerequisite: GEOG 214 or permission of instructor. Recommended: MATH 151 and 152 or MATH 154 and 155 or MATH 157 and 158. Quantitative.

GEOG 315-4 Regional Ecosystems
Physical and biological characteristics of regional ecosystems; historical evolution of biomes, management of natural resources.
Prerequisite: GEOG 215 or BISC 204.

GEOG 316-4 Ecosystem Biogeochemistry
Introduction to the cycling of essential chemical elements through ecosystems. Interactions among biological, hydrological, and geological controls on the structure and function of ecosystems and the spatial-temporal scales of elemental cycling are emphasized.
Prerequisite: GEOG 215 or BISC 204 or permission of the instructor. Quantitative.

GEOG 317-4 Soil Science I
An introduction to the study of soils: physical, chemical and biological properties of soils; soil formation, description, classification, survey and use. Field and laboratory techniques of soil analysis.
Prerequisite: GEOG 111 and one of GEOG 213, 214, 215, CHEM 121.

GEOG 322-4 World Resources
An analysis of the use and development of natural resources from a geographic, economic and institutional perspective. Prerequisite: at least 30 credit hours including GEOG 221.

GEOG 322W-4 World Resources
An analysis of the use and development of natural resources from a geographic, economic and institutional perspective. Prerequisite: at least 30 credit hours including GEOG 221. Writing.

GEOG 323-4 Industrial Location
An examination of the factors affecting industrial location and the geographic organization of production systems within and among firms from the perspectives of national, regional and urban development.
Prerequisite: GEOG 221.

GEOG 324-4 Geography of Transportation
An empirical and theoretical examination of the geographical aspects of transportation systems.
Prerequisite: GEOG 221 and 241.

GEOG 325-4 Geography of Service Activities
Central place theory, marketing and retail location, urban economic base, land use models, and tourism.
Prerequisite: GEOG 221 or 261.

GEOG 327-4 Geography of Tourism and Outdoor Recreation
Factors underlying the changing geography of tourism and outdoor recreation. Issues of demand, supply and impact are examined.
Prerequisite: GEOG 221 or 241, or permission of the instructor.

GEOG 351-4 Cartography and Visualization
Elements of cartographic analysis, design and visualization, with an emphasis on digital mapping, animation techniques, cartographic software and internet mapping.
Prerequisite: GEOG 255. Quantitative.

GEOG 352-4 Spatial Analysis
Advanced quantitative techniques for spatial analysis of geographic data and patterns. Topics include geostatistics, spatial interpolation, autocorrelation, kriging, and their use in geographic problem solving with spatial analysis software.
Prerequisite: GEOG 251 or STAT 270 or 201. Quantitative.

GEOG 353-4 Remote Sensing
Applied remote sensing and image analysis. Topics include air photo interpretation, multispectral and color photography, thermal imagery, multispectral scanners, microwave applications, satellite imagery. The relation of remote sensing information and Geographic Information Systems is discussed.

GEOG 355-4 Geographical Information Science
An examination of technical components of GIS. Topics include spatial representations, generalization and data management and set theory; digital surfaces and terrain models.
Prerequisite: GEOG 255. Quantitative.

GEOG 356-4 Cognitive Cartography
Analyzes the map-user interface, the basic perceptual and cognitive processes used by the map reader, and the principles of design and presentation which lead to effective map use.
Prerequisite: GEOG 250 or 253.

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 human interaction with physical environment, focusing on the individual as the unit of analysis, with special emphasis upon designed environments. A series of field studies will be required of each student.
Prerequisite: GEOG 241.

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: 48 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 problems of the interactions of political decisions and power structures with territorial organization.
Prerequisite: GEOG 241.

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 worlds; 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 224.
GEOG 388-4 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 people, the distribution 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 explores feminist theory in geography and its analysis of home, city, nation, state, global economy, colonialism, and migration. Prerequisite: GEOG 241.

GEOG 389-4 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).

GEOG 398W-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 and survey-based 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 402-4 Geography Practicum III
This is the third work experience in the Geography Co-operative Education Program. 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 403-0 Geography Practicum IV
This is the last semester of work experience in the Geography Co-operative Education Program. 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 409-0 Geography Practicum V
This is an optional semester of work experience in the Geography Co-operative Education Program. 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 251, 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 313; EASC 201 recommended. Students who completed GEOG 412 prior to fall 1996 may also take this course for credit.

GEOG 412W-4 Glacial Processes and Environments
A critical evaluation of glacial processes and environments; application of field techniques. Prerequisite: GEOG 313; EASC 201 recommended. Students who completed GEOG 412 prior to fall 1996 may also take this course for credit. 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 vegetation analysis. The application of these theories and techniques to biotic resources management is also examined. Prerequisite: GEOG 315.

GEOG 416-4 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.

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 Comparative Cultural Geography
A comparative study of selected world cultures and landscapes in the light of recent theoretical developments in geography. Prerequisite: at least 60 credit hours including eight 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
Practical course on the role of 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 forest cultures 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 441-4 Cities, Space, and Politics
An examination 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.

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 major resource sectors. Prerequisite: GEOG 322 or 385.

GEOG 446-4 Migration and Multiculturalism
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.
COURSES

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: Enrollment in the Post Baccalaureate Program in Sustainable Community Development; or 60 credit hours, and one of GEOG 351, 352, 353, 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 251 and one of GEOG 351, 352, 353 or 355. Quantitative.

GEOG 453-4 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.

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 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 that 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 489 – 494 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 relating 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
Qualitative and quantitative techniques relevant to human geographic research.

GEOG 605-4 Geographic Ideas and Methodology
Contemporary and historical modes of analysis in human geography.

GEOG 606-5 Research Design and Analytical Techniques in Physical Geography
Research design, data collection and quantitative methods in physical geography.

GEOG 611-4 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 society and 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 philosophies.

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.

GEOG 666-4 Geography, Development Theory, and Latin America
Geographic aspects of theories of development as they have been applied in Latin America.

GEOG 681-4 Law and the Geographies of Power
Case studies of the inter-relations between the social and political construction of law and space.

GEOG 685-4 Resources, Environment and Food Production
A global survey of the geographical context of food production.

GEOG 691-4 Directed Readings
Students may only take this course once during their program.
GEOG 697-6 MSc Thesis
GEOG 698-6 MA Thesis
GEOG 699-6 PhD Thesis

German
Faculty of Arts and Social Sciences
Department of Linguistics
Language Training Institute

GERM 102-4 Introductory German I
Emphasis on the acquisition of spoken fluency, correct pronunciation, and reading facility. This course will be for all students who have not taken BC grade 12 German or its equivalent.

GERM 103-4 Introductory German II
Continuation of the work of GERM 102 (formerly GERM 100-3); it should be taken wherever possible, in the semester immediately following GERM 102-4.

GERM 104-3 German for Reading Knowledge I
This is a first year German course intended for absolute beginners who want to acquire some rudimentary reading knowledge of German.

GERM 201-3 Intermediate German I
Emphasis on oral command, accurate and idiomatic expression; reading of intermediate texts.

GERM 202-3 Intermediate German II
This course continues the work of GERM 201.

GERM 300-3 Advanced German: Composition and Conversation
Practice in comprehension, reading, speaking and writing, combined with a review of the essential points of grammar.

Gerontology
GERO Faculty of Arts and Social Sciences

GERO 300-3 Introduction to Gerontology
Examination of the aging process from a multi-disciplinary perspective. Physical and health factors in aging, economic and vocational factors in aging, family and community relations of older people, social policy and politics of aging. Throughout the course, emphasis will be placed on normal aging.

COURSES

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.

GERO 401-3 Aging and the Built Environment
Impact of the macro- and microenvironment as it affects the aged. Discussion of planned housing and institutional living arrangements, territoriality 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.

GERO 402-3 Drug Issues in Gerontology
Considers pharmaceutical issues as they apply to older people: uses and abuses of commonly prescribed and non-prescribed medication; medication reviews; government subsidy programs.

GERO 403-3 Counselling Issues with Older Adults
An examination of the ways of adapting counselling theory and techniques to 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.

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 biological, 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.

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.

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 toward dying, the student will gain new insights in caring for the dying person.

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.

GERO 408-4 Families and Aging
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.

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 of health education interventions.
the development and critical analysis of a variety of health initiatives aimed at healthier 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 institutional living environments 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 889-6 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 889-6 Thesis**
A thesis must be written under committee supervision for formal examination as part of the program requirements for students in the thesis stream.

**Global Health GLOH**

**Faculty of Health Sciences**

**GLOH 501-4 Selected Research Applications in Global Health**
A survey of strategies in contemporary use for problem solving in global health. The course will conceptualize and integrate applications of current methodology as a foundation for advanced studies and research in Health. Health professionals and students are expert in the areas will moderate student discussion. Graded satisfactory/unsatisfactory.

**GLOH 510-4 Numerical, Analytical, and Computational Foundations for Global Health Studies**
Methodology for numerical analysis in health problem investigation, conceptualization, and solution. Health data and how they are obtained, stored, and accessed. Analytical approaches to the prevalence, causes, mitigation of health risks, and epidemiological inquiry. Pitsfalls and solutions in the collection and interpretation of data. A case-studies approach. Prerequisite: evidence of ability to undertake graduate courses in Health Sciences – fourth year standing as an undergraduate, or equivalent.

**GLOH 520-4 Research Methods for Evidence-Based Practice in Global Health**
A survey of contemporary problem-solving strategies for community, population, and global health. Research methods for optimizing health in low and middle-income countries or marginalized communities in developed countries. A case studies approach.

**GLOH 530-4 Foundations of Epidemiology in Global Context**
Epidemiological approaches to the distribution of health and disease across populations worldwide. Analytical tools for understanding and drawing inferences. Epidemiological approaches to the inequalities in health among populations. Evidence-based epidemiology, distinguishing cause from effect, and decision-making under uncertainty. A case studies approach.

**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 601-3 Organization and Reform of 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: evidence of ability to undertake graduate courses in Health Sciences – fourth year standing as an undergraduate, or equivalent.

**GLOH 670-3 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.

**GLOH 680-3 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.

**GLOH 690-3 Health and the Economy**
Health and economic development. Health systems and economic outcomes. Practical application of economic theories to health financing and resource allocation policy problems in resource-constrained nations and the use of cost analyses in the reforming of health policies. A case studies approach. Prerequisite: admission to the MGH program or permission of instructor.

**GLOH 696-3 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 MGH program. Prerequisite: admission to the MGH program or permission of instructor.

**GLOH 697-3 Special Topics in Global Health**
Intensive study of a special topic in an area not covered within the graduate program. The course may be offered as a lecture or seminar 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. Reading comprehension, and the ability to write small paragraphs will also be emphasized. 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. Prerequisite: 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 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 topic areas. 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 psychosexual development across a range of sexual behaviors. A perspective on the effects of socialization on sexual attitudes and behavior.

HSCI 130-3 Foundations of Epidemiology
A study of how diseases are distributed across human populations, the factors that influence susceptibility to, and prevalence of, diseases. Access to, and the use of, biochemical, clinical, and statistical data. Getting beyond correlations to cause and effect. A non-mathematical introduction to the methodology of epidemiological inference in determining the causes, control, and spread of diseases.

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. Incorporation 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 170-3 Environmental Impacts on Human Health
Analysis of environmental risks to health in both the workplace and external environments. The impact of industrial activity on the health of rural and urban communities. The health effects of industrial, environmental, and workplace hazards. Chemical, and biological hazards to lung, nervous, immune, and other body systems. Methodological approaches to their detection, assessment, management, and mitigation.

HSCI 210-4 Cancer
An integrated survey of cancers. Their causes, pathology, and treatments. Genetic and environmental risk factors, screening and preventative measures to reduce occurrence and mortality of cancer. Prerequisite: 15 credit hours of courses completed, including at least two of HSCI 110, 130, 140, 160.

HSCI 211-4 Cardiovascular Disease, Diabetes, Obesity
An integrated survey of cardiovascular diseases, diabetes, and obesity. Causes, pathology, and treatments. Life style, dietary and genetic risk factors, preventative measures to reduce morbidity and mortality. Prerequisite: 15 credit hours of courses completed, including at least two of HSCI 110, 130, 140, 160.
HSCI 212-4 Infectious 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: 15 credit hours of courses completed, including at least two of HSCI 110, 130, 140, 160.

HSCI 213-4 Environmental Impact on Human Health
An integrated survey of environmental health hazards and their social and economic causes and consequences. Environmental risks in the workplace and the wider external environment. The impact of industrialization in rural and urban communities. Methodological approaches to their detection, assessment, management, and mitigation. Prerequisite: 15 credit hours of courses completed, including three hours of STAT and at least two of HSCI 110, 130, 140, 160.

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: HSCI 210, 211, 212, 213.

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 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 system. Prerequisite: HSCI 210, 211, 212, 213.

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. Choices within limited resources, economic evaluation of efficiency, equity, elasticity of health systems, policy and regulatory issues. Prerequisite: HSCI 210, 211, 212, 213.

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 330-3 Exploratory Strategies in Epidemiology

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 geographic 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 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, morbidity, and strategies for better outcomes in disadvantaged communities. Prerequisite: HSCI 301, 302.

HSCI 471-3 Special Topics in Health Sciences I
Selected topics in areas not currently offered within the undergraduate course offerings. Prerequisite: HSCI 301, 302.

HSCI 472-3 Special Topics in Health Sciences II
Selected topics in areas not currently offered within the undergraduate course offerings.

HSCI 473-3 Special Topics in Health Sciences III
Selected topics in areas not currently offered within the undergraduate course offerings.

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. Prerequisite/corequisite: HSCI 490.

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/corequisite: HSCI 490.

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.

HSCI 801-4 Biostatistics I
Introduction to statistical techniques required in epidemiologic and health care research. Review of descriptive and graphical methods, probability distributions, estimation and inference, rates and standardization, introduction to lifetables, diagnostic tests and ROC curves. Design of experiments. General concepts in hypothesis testing; power and sample size estimation. Inference for proportions, contingency tables, odds ratios. Prerequisite: an undergraduate course in statistics.

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. Prerequisites: depending on the special topic offered.

HSCI 891-4 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 899-6 MSc Thesis

History HIST
Faculty of Arts and Social Sciences

HIST 101-3 Canada to Confederation

HIST 102-3 Canada since Confederation
A survey of Canadian history since 1867. Breadth-Humanities.

HIST 102W-3 Canada since Confederation
A survey of Canadian history since 1867. Writing/Breadth-Humanities.

HIST 104-3 History of the Americas to 1763
An examination of the pre-European Indian cultures; the explorations, conquest and colonization of North and South America by the French, English, Spanish and Portuguese. Stress will be placed on the comparative nature of these new world societies.

HIST 105-3 Western Civilization from the Ancient World to the Reformation Era
An introduction to the Greek and Roman origins of Western civilization and its development to the 18th century. 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 in Recent History
Colonialism, independence and nation building.

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 2008 may not 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 American 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 reconciliation; Latin America in the world trade system and the changing conditions of economic dependency; nationalist reform (Mexico) and socialist revolution (Cuba). 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 the establishment of the colonies through the Civil War and Reconstruction. 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, cultural and political antagonisms. 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.

HIST 220-3 The Later Middle Ages
This course will examine European history from the high middle ages to the beginning of the Reformation. Attention will be given to both material and cultural dimensions of medieval European civilization.

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 The Origins of Modern Africa: Conquest, Resistance and Resurgence
Continuity and change in sub-Saharan Africa from the era of the slave trade until World War II.

HIST 249-3 Classical Islamic Civilization
This course offers 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 break-up 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 contexts that have shaped the Islamic period of Indian history. 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 course is designed 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 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 305-2 Honors Tutorial
Open only to honors students, this tutorial will be taken in conjunction with HIST 300. Readings in the philosophy of history and historiography will be discussed. 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 Hellenic 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.
400 Course Catalogue – History

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 since the Revolutionary era. Special attention will be paid to British Columbia as a case study. Historically the course examines working class history as a particular way of studying the past. What is the concept of 'the working class'? Prerequisite: 45 credit hours including 9 hours of lower division history credit. Recommended: HIST 101, 102 and 204.

HIST 328-4 The Province of Quebec from Confederation
The economic, social, political and cultural history of Quebec. Prerequisite: HIST 102 plus 45 credit hours including 9 hours of lower division history credit. Recommended: HIST 101.

HIST 329-4 Canadian Family History
A detailed examination of the changing Canadian family, and its relationship to the state, since the eighteenth century. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 329-4 Canadian Labor and Working Class History
An examination of the history of labor, primarily in English Canada, during the 19th and 20th centuries.

HIST 330-4 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 9 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 Migration
Topics in the history of European migrations with attention given to the contexts from which the migrants came, to why they migrated, and how they adjusted. Examples may be taken primarily from the United States, Canada or Latin America, but reference will be made to all three. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 325-4 History of Aboriginal Peoples of North America to 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 Since 1850
An examination of 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 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.

HIST 327-4 Canadian Family History
A detailed examination of the changing Canadian family, and its relationship to the state, since the eighteenth century. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 328-4 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 9 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 329-4 Canadian Labor and Working Class History
An examination of the history of labor, primarily in English Canada, during the 19th and 20th centuries.

HIST 330-4 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 9 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 331-4 The Modern French Nation
An examination of the history of labor, primarily in English Canada, during the 19th and 20th centuries.

HIST 332-4 Politics and Culture in Modern Germany
An examination of major themes in German history from the establishment of a united German Empire in 1871 to the reunification of Germany in 1990. Emphasis will be placed on issues related to the formation of German national identity and the problems associated with modernization and militarism. Attention will be given to the difficulties of Weimar democracy, the nature of the Third Reich, and contrasting developments in East and West Germany after 1949. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 333-4 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 335-4 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 9 hours of lower division history credit.

HIST 336-4 Ideas and Society in Early Modern Europe
An examination of intellectual developments of early modern Europe (sixteenth to eighteenth centuries) in their broader social, cultural, political or economic contexts. The course will focus on a particular subject e.g. Northern humanism, debates about the nature and social role of women (the querelle des femmes), the Enlightenment. Students will read excerpts from important contemporary sources. 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 shifting power among competing states within 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 252.

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.

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 9 hours of lower division history credit.

HIST 345-4 Selected Topics in European History
A writing-intensive examination of selected topics in European history. 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 with HIST 345 for further credit if duplicating content of another history course and vice versa.

HIST 345W-4 Selected Topics in European History
A writing-intensive examination of selected topics in European history. 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 with 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 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
The intellectual and social history of greater 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 354-4 Imperialism and Modernity in the Middle East
This course examines the role of imperialism in the transformation of societies in the Middle East and North Africa over the last two centuries. Focusing mainly on the cases of Ottoman, British and French empire building, the course discusses the socio-economic and political changes brought about by the interaction of various segments of local societies with these imperial powers. 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 361-4 The History of Science: The Eighteenth Century to the Present
Topics in the history of science and technology to be selected from the 18th/19th century chemistry; the history of the idea of evolution and of Darwinian science, physics to 1914, or 19th century industrial science. Prerequisite: 45 credit hours including 9 hours of lower division history or science credit.

HIST 366-4 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 368-4 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.

HIST 368W-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 370-0 Practicum I
This is the first semester of work experience in co-operative education. It is meant to be exploratory in nature. 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 372-4 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 9 hours of lower division History credits and one of HIST 101 or 212, or permission of the department. Breadth-Humanities.

HIST 374-4 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 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 375-0 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 of history. 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, capital, and environment. 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 environmental influences on the nature and culture of human societies. 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 ‘war on terror’. Topics include: the diplomatic and political history of American foreign relations; economics and the American roots of ‘globalization’; race, racism and the movement of peoples; and the relationship between cultural history and the extension of American interests overseas. Prerequisite: 45 credit hours including 9 hours of lower division History credit. Recommended: HIST 212 and 213, HIST 208 and 209. Students who have taken HIST 390 in 1051 may not take this course for further credit.

HIST 382-4 African-American History, since 1865
Examines black history from the end of the American Civil War. The course focuses on the external and internal forces which shaped black communities across the nation. Special attention will be paid to these communities’ struggles against the forces which sought to confine black people to an inferior place in society. Prerequisite: 45 credit hours including 9 hours of lower division history credit.

HIST 388-4 Global Histories
An examination of select topics in Global History since 1500. Students will explore the connections between regions rather than individual regional histories. The specific focus will be chosen by the instructor, but may include migration, trade, environmental change, science, and other global phenomena. Prerequisite: 45 credit hours, including 9 hours of lower division History credit.

HIST 390-4 Studies in History I
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 391-4 Studies in History II
Special topics. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 400-4 Seminar in Historical Methods
A study of methodology, including such subjects as principles of historical criticism, annotation and transcription of source material, generalization, and the techniques of history and the social sciences. Examples will be drawn from all areas in which the department teaches. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 401-4 Problems in Modern German History
An examination of major debates concerning the history of late-nineteenth and twentieth century Germany. Themes may include the nature of German modernity, interpretations of the Third Reich, or German memory after the Second World War. Prerequisite: 45 credit hours, including nine hours of lower division History credit and one of HIST 224, 225, 332 or permission of the department. Students who have taken HIST 486 in 2002-3 or 2003-3 may not take HIST 401 for further credit.

HIST 402-4 Renaissance Italy
An assessment of the principal themes in the history of late-fourteenth and early sixteenth century Italy. Themes may include the nature of Renaissance Italy in shaping the character of Early Modern Europe. In certain semesters the experience of one or more Italian cities will serve to elucidate these themes. Prerequisite: 45 credit hours including nine hours of lower division history. Recommended: HIST 220.

HIST 404-4 Protestants, Papists and Puritans: Culture and Belief in Early Modern England, 1500-1640
From the world of late-medieval piety to the outbreak of the English Civil War, this seminar examines the changing nature of religious belief in early modern England with a particular focus on the origins, development and impact of Protestantism. Prerequisite: 45 credit hours including nine hours of lower division history credit and one of HIST 223, 315, 320, 405, 439 or permission of the department.
HIST 405-4 Authority and Community in Early Modern English Society, 1500-1700
Examines select problems in the social history of early modern England with a particular focus on the changing relationship of authority and local communities and the level of the village and parish.
Prerequisite: 45 credit hours including nine hours of lower division history credit and one of HIST 215, 223, 315, 316, 404 or permission of the department.

HIST 407-4 Popular Culture in Great Britain and Europe
This course will study culture in Great Britain and Europe since 1500. Themes may include the sixteenth century separation between popular and elite culture, Carnival, the witch craze, popular ballads, the institution of "national religion" during the Industrial Revolution, the late Victorian Music Hall, the cultural emancipation of women, and the effects on working class culture of economic depression and world war.
Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 105 or 106.

HIST 411-4 Class and Gender in Modern Europe
This seminar will examine theories of class and gender as they apply to modern European social, economic, and political development. In certain seminars the emphasis may shift from class analysis to gender relations and women's history; but the interrelationship of class and gender will always be considered.
Prerequisite: 45 credit hours including nine hours of lower division history credit.
Recommended: HIST 224 and 225.

HIST 412-4 Marxism and the Writing of History
This course aims to provide a basic understanding of Marx's theory of history and to introduce students to some of the important ideas used by Marxists in the writing of history. Readings for the course will include some of Marx's original work, the writings of historians who have been influenced by Marx as well as selected writings from some of Marx's critics.
Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 413-4 Britain and Europe in the Twentieth Century
An examination, by means of a series of case studies, of the ways in which Britain's ambiguous relationships with Europe, the Empire/Commonwealth and the United States have shaped its identity in the Twentieth Century.
Prerequisite: HIST 225 plus 45 credit hours including nine hours of lower division History credit.
Recommended: HIST 337.

HIST 414-4 The Impact of the Great War
A brief look at the political, social, and territorial changes of the Versailles settlement, followed by an examination of the impact of the war upon Europe, particularly through the examples of fascism in Italy, the cultural emancipation of women, and the effects on working class culture of economic depression and world war.
Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 223, 224.

HIST 417-4 Problems in Modern French History
An examination of a principal aspect of, or period in, the history of French society since the Revolution. For example, attention may be given to the 19th century, French revolutionary tradition, or to society and culture in the Third, Fourth and Fifth Republics, or to colonialism and decolonisation.
Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 224 or 225.

HIST 419-4 Problems in Modern Russian History
Advanced analysis of specific problems in social, intellectual, and political history of modern Russia.
Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 224 or 225.

HIST 420-4 Russia as a Multiethnic Empire
An examination of how the Russian Empire grew, was maintained, and came to an end, if it did end, through a study of imperial and colonial policies and practices and the responses to these by the area's diverse peoples.
Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 421-4 Modern Greece, 1864-1925
Greece and Greek society will serve as a case study of a Balkan country that underwent several political and social transformations. 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 423-4 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 424-4 Race, Expansion and War in the Modern World
An examination of 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 447-4 Problems in Modern French History
An examination of a principal aspect of, or period in, the history of French society since the Revolution. For example, attention may be given to the 19th century, French revolutionary tradition, or to society and culture in the Third, Fourth and Fifth Republics, or to colonialism and decolonisation.
Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 224 or 225.

HIST 450-4 Race, Expansion and War in the Modern World
An examination of 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. Recommended: HIST 101, 102.

HIST 451-4 North America after 1500, and discusses the usefullness of 'empire' 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 452-4 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 credit.

HIST 456-4 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 457-4 Race, Expansion and War in the Early American Republic
Exploration of the awkward relationship between racial diversity and territorial expansion in the early American republic, and examines the political, social, economic and cultural elements that led 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 458-4 The United States in Depression and War
An examination of the impact of the Great Depression and the Second World War in shaping modern American society. Topics covered will include the
development of the welfare state, the rise of industrial unions, the evolution of Keynesian economic policy, and the battles over race, class and gender in the 1930s and on the wartime homfront. Prerequisite: 45 credit hours including nine hours of lower division history credit including HIST 213 or permission of the department. Students with credit for HIST 448 under the same topic may not take HIST 453 for further credit. Recommended: HIST 212 or 213.

HIST 454-4 The History of Sexuality
Explore the role that desires and identities have changed over time in response to social, political and economic pressures. Emphasis 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 resistances to slavery, 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 issues and 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 1067 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 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, populism, 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 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 globalization, modernization, and power. Prerequisite: 45 credit hours including nine hours of lower division history credit and one of HIST 151, 249, 251, 350, 354, 355 or permission of the department.

HIST 467-4 Modern Egypt
An interpretive discussion of the course of modern Egypt's history. This may range from the advance to power of Muhammed Ali Pasha 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 469-4 Islamic Social and Intellectual History
Advanced analysis of specific problems in Islamic social and intellectual history, with an emphasis on traditional patterns and on their transformation in the modern world. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: one of HIST 249 or 352.

HIST 470-0 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. 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 semesters 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 hours 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.

HIST 473-4 The Making of South African Society
An examination of the way in which South African society evolved in the 19th and 20th centuries. Particular attention will be paid to the problem of race relations. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: HIST 231, 348.

HIST 475-0 Practicum IV
This is the fourth semester of the Co-operative Education Program. The work experience will require a high level of expertise in research and writing skills as well as an ability to exercise independent judgement. Prerequisite: normally 105 semester hours (including HIST 370, 375 and 470) with a minimum CGPA of 2.75. Students should apply to the co-op co-ordinator one semester in advance. Students entering 400 division semesters should have an appropriate background. Prerequisite: 45 credit hours including nine hours of lower division history credit. Normally, students should have completed 45 credit hours (or the equivalent) prior to enrollment in any upper division history course.

HIST 479-4 Change, Conflict and Resistance in Twentieth-Century China
Focuses on the underprivileged and disfavored groups that changing political economic environments; workers, women, ethnic minorities, and the Chinese diaspora. Students will be prepared for further study in Modern Chinese. Prerequisite: 45 credit hours including nine hours of lower division History credit, including HIST 255 or 365, or permission of the department.

HIST 483-4 The Struggle for Identity in Sub-Saharan Africa
Selected topics in the history of an African state. Prerequisite: 45 credit hours including nine hours of lower division history credit.

HIST 484-4 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 489-4 Studies in History
Special topics. 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. Prerequisite: 45 credit hours including nine hours of lower division history credit. Recommended: at least three upper division courses in history.

HIST 498-8 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
Course will survey the range of historical literature produced between the period of the Second World War and the present. Requires an appropriate background in 100 and 200 division. This course will be given as an individual reading course or as a seminar. Recommended: one of HIST 251, 350, 354, 355 or permission of the department.

HIST 806-5 The Middle East in Canadian History
Prerequisite: normally 90 semester hours (including HIST 255 or 365, or permission of the department.

HIST 810-5 Themes in European History
HIST 812-5 Special Topics in History
HIST 814-5 Research Seminar
HIST 819-5 Mediaeval Europe
This course will survey the range of historical literature produced between the end of the Second World War and the present. Requires an appropriate background in 100 and 200 division. This course will be given as an individual reading course or as a seminar. Recommended: one of HIST 251, 350, 354, 355 or permission of the department.

HIST 820-5 Modern Russia
HIST 821-5 Early Modern Europe
HIST 822-5 Modern Great Britain
HIST 823-5 Modern Germany
HIST 824-5 Modern France
HIST 825-5 Modern Germany
HIST 826-5 International Relations

Simon Fraser University 2006 • 2007 Calendar
HUM 151-3 Ancient Greek 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 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 Ancient World, Middle Ages and the Renaissance. Prerequisite: HIST 105 or PHIL 151 or 150 or 30 credit hours. Breadth-Humanities.

HUM 202-3 Great Texts in the Humanities II
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 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 216-3 The Ancient World
Aspects of the ancient history and culture of the Near East, Greece and Rome. Recommended: HIST 105. 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 230-3 Introduction to Religious Studies
The exploration of religion as expressed in a number of major traditions including an investigation of primary textual sources. Breadth-Humanities.

HUM 240-3 Studies in European Cultures
An interdisciplinary approach to European cultures through the examination of historical, literary, philosophical and aesthetic materials related to a specific period and place in the development of Western civilization. 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 302-4 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. Breadth-Humanities.

HUM 302W-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. 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 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 312-4 Renaissance Studies
A detailed interdisciplinary analysis of a selected topic, issue, or personality from the Italian and/or Northern Renaissance. Prerequisite: 45 credit hours.

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, literature 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 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 classic 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 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 a course with this content under another Humanities course may not take this course for further credit.

HUM 375-4 The Woodsworth Seminar
A special topic in the humanities to be offered by the Woodsworth 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 471-0 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. Prerequisite: a minimum of 30 credit hours with nine credit hours in Humanities courses and a minimum CGPA of 2.75.

HUM 472-0 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. 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 473-0 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. Prerequisite: successful completion of HUM 472, a minimum of 60 credit hours with nine credit hours in Humanities courses plus a minimum CGPA of 2.75.

HUM 474-0 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. 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: the 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 898-6 MASc Project/Research Paper
ITEC 899-6 PhD Thesis

Interactive Arts IART
Faculty of Applied Sciences

IART 898-6 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 to ethnocentric norms are explored through creative media projects.

IAT 101-3 Media Images
The social and psychological effects of technological developments on contemporary art and design practices are examined and developed in relation to interface design and web-based software applications. Students with credit for TECH 121, 122, 123 and 124 may not take this course for further credit.

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 literarily 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 Usability in Interactive Environments
Explores the theoretical foundation, philosophy and practical application of techniques for analyzing how people interact with designed environments covered by the 4 IAT streams, including performance environments, human systems, new media, etc. A major goal is to determine how these environments should be designed to suit human capabilities. Students will engage in simple empirical usability studies in conjunction with active research projects within SIAT to gain experience in current usability practice. 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 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 and representation 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 animation. Prerequisite: IAT 100, 101. Students with credit for IART 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 expanded media practice.

IAT 206-3 Media Across Cultures
A critique of current approaches to media and the design of cultural interfaces. Cultural differences in art, design and communication are examined and related to current trends in new media. Culturally appropriate alternatives to ethnocentric norms are explored through creative media projects.
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 engage drawing as a medium for visual thinking and conceptualization. Related social and gender concerns are investigated to contextualize figurative representations within a broader cultural framework. Prerequisite: TECH 101, IAT 101, CMPT 125, TECH 114 or equivalents. Students with credit for IART 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: IAT 100, 101. Students with credit for INTD 213, 214 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: IAT 100, 101. Students with credit for INTD 213, 214 and 215 may not take this course for further credit. Writing.

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 of concept to emergent 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 IART 213, 214 and 215 may not take this course for further credit.

IAT 231-3 Visualizing Interaction
Visually interacts 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 storyboarding 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 techniques in assessing human factors and efects for 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 241-3 Animation
An introduction to techniques for 3D computer animation such as keyframing, performance animation, procedurization, 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 into and the application of real-time computer animation such as facial animation, behavioral animation, artificial life and interactive systems. Students with credit for IART 219, 220 and 221 may not take this course for further credit.

IAT 242-3 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 skills and extend student’s abilities to use a range of digital production, post-production, and presentation techniques. Prerequisite: IAT 100, 101. Students with credit for IART 222, 223 and 224 may not take this course for further credit.

IAT 243-3 Sound Interaction
An introduction to the psychoacoustic and psychoacoustical properties of our sense of sound 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 formation in New Media will be investigated, along with aesthetic/functional aspects of site navigation, design, sequence and consistency. Students with credit for IART 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 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.

IAT 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 will be based on both programming and the expressive use of programs in their case context. Prerequisite: IART 225 (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.

IAT 301-3 Interactive Media Design
Covers physical interaction design and machine perception techniques useful in the design of audiovisual media display systems, physical installations, and mediated performance. Principles of physical interaction are explored through projects in interactive media. Readings, discussion and writing are conducted in critical issues in the historical development of interactive media including the poetics of space, site, time and technology. Prerequisite: Completion of 48 credits including IAT 204. Students with credit for IART 313, 314 or 315 cannot 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 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 (sociocultural 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; both 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 involve the work of New Media theorists such as Janet Murray or Lev Manovich. Prerequisite: Completion of 48 credits. Students with credit for IART 325, 326, or 327 cannot take this course for further credit.

IAT 320-3 Body Interface
Explores ideas 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 credits, including IAT 301. Recommended: IAT 321 and 322. Students with credit for IART 331, 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 kinesthetics 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 complemented by theoretical discourse in the area of dance, cyborg theory, architecture and technologically mediated space. Classes are part
IAT 322-3 Current Topics in Performance and Media Arts
Addresses current topics relating to performance and media arts in the context of Interactive Arts and Technology. Practices and conceptual frameworks from academic and professional worlds of interactive art will be examined. Students will read, conceptualize, and articulate debates based on their own developing interactive arts practices. Prerequisite: Completion of 48 credits. Recommended: IAT 321 and IAT 323. Students with credit for IAT 319, 320, or 321 cannot 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 interactivity 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 collaboration 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 48 credits. Corequisite: IAT 301 recommended. Students with credit for IART 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 theory, Marketing and demographic research, and information design models 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 theories 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 group within which he/she functions. 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 332-3 Design Evaluation
Examines evaluation concepts and methods for interaction design. Students learn about evaluation approaches including informal evaluation, usability, field studies, heuristics, critique and discursive evaluation. Students will explore techniques for feedback including observation, interviews, expert reviews, use experience, modeling, and critical analysis. Underlying concepts of evaluation including scientific observation, ethnography, phenomenology, and aesthetics will be discussed. Students will learn how to design and implement appropriate evaluation studies for a range of ubiquitous computing environments. Prerequisite: completion of 48 credits, including IAT 302.

IAT 333-3 Interaction Design Praxis: Practice and Methods
Examines concepts of design practice and related design methodologies. 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, situated use. These include pattern 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 IART 317 or 318 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. Students will also study qualitative, quantitative, and interpretive modes of analysis of data and how to support design with these findings. Students will engage in a range of case-stories and projects that are a part of the design completion of 48 credits, including IAT 232 and IAT 331. Recommended: IAT 302.

IAT 338-3 Interactive Prototypes
Develops programming and scripting skills for developing combined software, and hardware prototyping and other products and systems. Emphasizes hands-on level programming skills such as MAX and Flash in conjunction with hardware/sensor systems that enable students to develop working prototypes of their projects for design and testing. Types of programming projects will include software, interactive systems, network and web-based systems, wearable, and mobile devices. Prerequisite: Completion of 48 credits, including IAT 231 and 232. Students with credit for IART 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 audio settings embodied in 3D 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 non-technical view 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, artificial life and interactive systems. Prerequisite: completion of 48 credits, including IAT 241.

IAT 351-3 Interaction Technology
Key areas of technology for supporting user interaction with systems in work, learning and play are introduced, employing tactile, aural, and visual senses of humans. Technologies used in sensors and actuators, robotic systems are reviewed for their applicability to user-centred interaction. Prerequisite: Completion of 48 credits, including CMPT 225.

IAT 352-3 Interactive Media
An introduction to knowledge media as the study of how people design, create and use technologies that convey knowledge. The emphasis is on how such media support people in learning and teaching. A range of technologies is treated in a comparative manner, addressing both utility for intended tasks and design and implementation. Particular topics include comparison of humanistic and technological views of knowledge; group creation of knowledge; visualization and visual inference; user modeling; collaboration and supporting technologies; computer-supported collaborative work; participatory design; and knowledge networks and communities. Prerequisite: Completion of 48 credits, including CMPT 225.

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 design 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 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. The first course of four is taught in Vancouver five weeks prior to departure for Italy. Students prepare research plans for use once they arrive at each of four destinations (Rome, Tuscany, Florence, Milan). The course covers histories of city planning, architecture and urban design in these venues that live on in contemporary Italian design. Field school instruction 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 fulfills the first phase. All projects will be available for viewing at the ItaliaDesign Field School public website. Students will also present their work to a live audience. Prerequisite: completion of 48 credits. Corequisite: IAT 392/IAT 393 (ItaliaDesign Field School).

IAT 392-3 Italian Design in Context: Learning from La Citta
Part of the 9-12 Credit ItaliaDesign Field School curriculum. Field school instruction 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
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hours, including IAT 312. Students with credit for IART

phenomena. Prerequisite: completion of 48

creeds. Corequisite: IAT 391/392

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 studies are supported by a series of in-situ

lectures to provide a context for further reflection.

Minor independent projects are completed in

Florence or 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 and directed course. 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 prototypes of based design.

These include the subcultures of wikis, 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

explored, complete and communicate their own

topics and questions. Students will be expected to

explore, research problems in design, explore research

investigation into a design-related research

problem. Prerequisite: completion of 69 credits,
including IAT 321 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 IAT400 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 Design Studio

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 430-3 Design Research

Exposes the practice of design helps to explain the world around us or how we can find ways to

improve the way we design. Introduces the

importance of design research in the domains of defining the field of design, design education and

design practice. Students will review case-stories of research projects and relate research

methods relevant to design, and explore research

topics and questions. Students will be expected to

explore, complete and communicate their own

research investigation into a design-related research

problem. Prerequisite: completion of 69 credits,
including IAT 332, 333, 335 and 338.

IAT 431-3 Advanced Topics in Interaction

Design

In-depth exploration of a specific design, cultural and/or social theme and its impact on design. The

thematic investigation will change each year and will

focus on topics not typically covered elsewhere in the

Interaction Design curriculum. Possible themes

include sustainability, design for developing nations,
globalization and localization, and other relevant

issues. Prerequisite: Completion of 69 credits, including IAT 332, 333, 335, 338.

IAT 443-3 Image, Sound and Motion Design

Studio

An intermediate level investigation of interactivity explored through media, in the context of current
display technologies relevant to Interactive Arts and design. Examines the concepts of animation and

composition and its experimental diversity, and its applications to the design of dynamic interactive

experiences. 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. Prerequisite: completion of 69

credits, including IAT 231 and 232. Recommended: IAT 332, 333, 335, 338.

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 454-3 Immersive Environments

An introduction to authoring virtual immersive

environments and worlds. Explores new forms of

interactive communication and delivery by using a

research practice approach which involves creating a

new methodology as the work is explored.

Prerequisite: Completion of 48 credits. Students

with credit for IART 416, 417, or 418 cannot take this
course for further 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-centred design processes and knowledge of

enabling technologies. This course covers all three

areas, with particular emphasis on how technologies enable human actions. The week-long field

study of a smart house is used to motivate and demonstrate how ubiquity can act as a design principle.

Prerequisite: Completion of 48 credits, including

CMPT 225.

IAT 452-3 Design Environments

Examines how people work with computers to do

design tasks and how design environments can be

designed and adapted to better support design work.

Covers the structure of design tasks, how computers

support design, the relationship of design to art and

how design work and gives practical experience in

changing design systems to better serve given tasks.

Uses contemporary design systems such as games

authoring environments, drawings systems and

parametric design systems as examples.

Prerequisite: Completion of 48 credits, including

CMPT 225.

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 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 486-3 Directed Studies
Independent reading and research topics selected in consultation with individual members of the SIAT faculty. Prerequisite: Completion of 69 credit hours, and permission of the instructor and School are required. No more than 6 credits of Directed Studies may be taken.

IAT 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 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 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 Research Methods and Strategies
Maps key methods and strategies of building reliable knowledge across diverse specializations within the graduate program. It is meant not so much to build specific expertise in a given set of techniques as to recognize issues underlying most all research and to appraise critically methods of observation, test and organization of findings. The course provides a common basis for discussion and criticism of research. The goal is a broad reading literacy across a spectrum of research, an essential step to knit collaboration and scholarly community.

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 selects and studies theoretical perspectives that inform the design of computer-based mediated environments, products and experiences.

IAT 813-3 Artificial Intelligence in Computational Art and Design
Working through the set of motivating examples from domains such as computer animation, 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 Encoding Media Practice
Studies conceptual, aesthetic, and computational issues and techniques involved in the encoding of interactive media objects. It includes study of theoretical and positivist backgrounds in computer-human interaction (Bush, Dinkla, De Landa, Grosz, Deleuze, Manovich, Murray, Laske, Hamman, Ascott, Penney, 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 learning particularly 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

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MIL 808-6 Internship Project
Students complete their internship project and work with their supervisory committee to bring it to a final acceptable form.

MIL 807-3 Internship II
Students complete their internship project and work with their supervisory committee to bring it to a final acceptable form.

MIL 806-3 Internship I
Students complete their internship project and work with their supervisory committee to bring it to a final acceptable form.

MIL 805-5 Directed Readings II
Prerequisite: MIL 804-5 Directed Readings I. 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.

INTS 220-3 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. Case studies, 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 round out the topics. Prerequisite: INTS 220.

INTS 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. Students must complete this course before taking INTS 499. Open only to students who have been accepted into the honors program.

INTS 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: INTS 490. Admission is by permission of the instructor and the School. Open only to students who have been accepted into the honors program.

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, will be enhanced. Prerequisite: ITAL 201 or permission of instructor.

JAPN 100-3 Introduction to Japanese I
A comprehensive introduction to the Japanese language including the three writing systems. Prerequisite: students with any prior knowledge or experience in Japanese beyond the level of this course may not register in this course. Students with some previous knowledge of Japanese should consult with the instructor for course placement.

JAPN 101-3 Introduction to Japanese II
Continuation of JAPN 100. Prerequisite: JAPN 100 or permission of the department.

JAPN 200-3 Advanced Beginners’ Japanese I
Continuation of JAPN 101. Prerequisite: JAPN 101 or permission of the department.

JAPN 201-3 Advanced Beginners’ Japanese II
Continuation of JAPN 200. Prerequisite: JAPN 200 or permission of the department.

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 of the principles of 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, 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...
KIN 207-3 Information Processing in Human Motor Systems
Students are introduced to human motor systems from a physiological, psychological, and computational perspective. This course will provide a practical understanding of voluntary movement (information processing). Learning will be evaluated through voluntary goal-directed movement. Research from a variety of distinct areas is integrated to provide a coherent picture of our understanding of human motor systems. Prerequisite: KIN 142 or permission of instructor.

KIN 208-3 Introduction to Physiological Systems
This course will cover the anatomy and physiological function of the major human systems, from a biomedical engineering perspective. Normal and abnormal functions of various systems will be studied and discussed 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 may not take either KIN 208 or BISC 305 for further credit.

KIN 209-3 Human Physiology I
Deals with 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 may 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 Kinesiology
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, electrophysiology, 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. A brief discussion on applied anatomy, aging, common dysfunctions and diseases enable students to appreciate the relationship between structure and function.
KIN 367-3 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 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 the influence of genetic and environmental factors in the development of physical fitness, discipline of interest, and factors influencing the growth of children and adults. 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 will include techniques for measurement and analysis of movement; analysis of forces and accelerations in three dimensions; work and power; simple biomechanical and biomechanics 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, group, and the management structure of the organization. Prerequisite: PSYC 210 or both KIN 207 and STAT 201. Corequisite: STAT 201 may be taken concurrently. Recommended: KIN 180.

KIN 382-3 Physical Hazards in the Workplace
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-centred 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 Behaviour 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 ageing) 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 trauma. Prerequisite: KIN 305.

KIN 415-3 Neural Control of Movement
An in-depth treatment of neurophysiology. 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 as 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 MBH 321 (or BCH 321).

KIN 431-3 Environmental Carcinogenesis
An introduction to core concepts in the field of environmental carcinogenesis. Emphasis will be on the complex interactions of lifestyle factors, carcinogen exposure, genetic susceptibility and dietary habits as determinants of cancer risk. Class work will include discussions of new techniques to...
KIN 443-3 Biomedical Systems

Concepts and tools of systems analysis will be introduced. Since these involve a philosophy of problem-solving rather than a catalogue of techniques, they will be applied to a number of very different situations in medicine and kinesiology. 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 343.

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 Neurobiology of Disease

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 will be explored, with special emphasis on advanced techniques to restore control of movement and bodily functions in paralyzed people. Prerequisite: KIN 201, 207, 306.

KIN 450-0 Practicum III

The third semester of work experience for students in the Kinesiology Co-operate Education Program. Prerequisite: KIN 352. Work terms are graded as pass/fail (P/F).

KIN 452-0 Practicum IV

The fourth semester of work experience for students in the Kinesiology Co-operative Education Program. Prerequisite: KIN 451. Work terms are graded as pass/fail (P/F).

KIN 453-0 Practicum V

Optional semester of work experience for students in the Kinesiology Co-operative Education Program. 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 coordination 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 Activity-generated Musculoskeletal Disorders

This is an interdisciplinary approach to understanding the causes and prevention of musculoskeletal disorders caused by activity (work and sport). Particular attention will be paid to injuries to the back, neck, hand and arm. 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 and the use of breathing apparatus and G-suits for high performance aircraft will be examined as they relate to solving the physiological problems of exposure to these environments. Emphasis will be placed on 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 interfacing 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. Topics include conceptual human-computer interaction and basic ergonomics/human factors 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 on observation and measurement, reporting 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 381, 382, 383, 481, 442, 486 and CMNS 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 for 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.

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 497. 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 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.

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 must 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 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-credit 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 specialized 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 806-3 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 807-3 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 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 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/or discussion of environmental physiological topics such as thermoregulation. 

KIN 825-3 Motor Learning and Control
Selected aspects of research and theory in the behavioural neuroscience. 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 835 may not take KIN 835 for additional credit.

KIN 840-3 Human Biomechanics
Review the theoretical basis and tools 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, hormone 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.

KIN 898-6 MSc Thesis
KIN 899-6 PhD Thesis

Labor Studies LBST
Faculty of Arts and Social Sciences
Department of History
LBST 101-3 Introducing Labor Studies
Introduction to key concepts necessary for understanding the character and organization of work in contemporary society. The discussion of such issues as how our society decides who works, what the work will be, and under what conditions people work, will be situated in the context of current debates, trend and issues.

LBST 301-3 Labor Movements: Contemporary Issues and Images
This course will give students a comprehensive understanding of the contemporary structure, issues, and perceptions of labor unions and other forms of working-class organization. It will focus on external and internal problems that the labor movement faces, such as labor law and state policy, employer strategies, bureaucracy, racism and sexism. The treatment of labor in the media and popular culture will provide an understanding of how labor is viewed in society, how labor views itself, and how working-class culture informs and is informed by the larger culture. Recommended: LBST 101.

Language LANG
Faculty of Arts and Social Sciences
Department of Linguistics
Language Training Institute
LANG 118-3 Introductory Farsi I
The acquisition of introductory 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 132 Introductory Fijian I
The acquisition of introductory 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. Variable credit hours: 1, 2, 3, 4, 5.

LANG 136 Introduction to a World Language I
The acquisition of introductory 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. Variable credit hours: 1, 2, 3, 4, 5.

LANG 148 Special Topics
The acquisition of introductory 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. Variable credit hours: 1, 2, 3, 4, 5.

LANG 168-3 Introductory Farsi II
The acquisition of basic proficiency in 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 100-149 in the same language, or placement on the basis of prior knowledge. Please inquire at the Language Training Institute for information on placement.
LANG 220-3 Intermediate Ancient Greek
LANG 222-3 Intermediate Language Study 1 – Latin III
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 224-3 Western Secwepemc/sin 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 270-2 Intermediate Ancient Greek II
Prerequisite: LANG 220-2 Intermediate Ancient Greek I.

LANG 272 Intermediate Language Study II – Latin IV
Further development of the skills of reading, writing and speaking 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 200-249 in the same language, or placement on the basis of prior knowledge. Please inquire at the Language Training Institute for information on placement. Variable credit hours 1, 2, 3, 4, 5.

LANG 292-5 Intermediate Language Study II
Further development of the skills of reading, writing and speaking 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 200-249 in the same language, or placement on the basis of prior knowledge. Please inquire at the Language Training Institute for information on placement.

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. Prerequisite: LAS 100 or 140 or permission of the instructor. Students who have taken LAS 200 as Introduction to Latin American Issues cannot take this course for further credit.

Breadth-Social Sciences.

LAS 330-3 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. LAS 330 is identical to ARCH 330, and students cannot receive credit for both courses.

LAS 380-0 Practicum I
First semester of work experience in the Latin American Studies Co-operative Education Program.

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 390-0 Practicum II
Second semester of work experience in the Latin American Studies Co-operative Education Program. 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 405-3 Special Topics: Field School II
This course will be part of the LAS field school in Latin America. A topic will be chosen which can be examined profitably from a multidisciplinary perspective. Prerequisite: LAS 200 or permission of the department.

LAS 480-0 Practicum III
Third semester of work experience in the Latin American Studies Co-operative Education Program. 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 490-0 Practicum IV
Fourth semester of work experience in the Latin American Studies Co-operative Education Program. 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 term paper will be required as 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 800-5 Approaches to Latin American Studies
An annual interdisciplinary seminar taught by selected Latin American studies faculty examining core theoretical and substantive themes in Latin America.

LAS 815-5 Latin American Economy and Society
LAS 825-5 Latin American History and Culture
LAS 835-5 Latin American Politics and the State

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 101-0 Practicum I
First semester of work experience in the Liberal Arts Co-operative Education Program. 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 201-0 Practicum II
Second semester of work experience in the Liberal Arts Co-operative Education Program. Prerequisite: successful completion of LBRL 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 301-0 Practicum III
Third semester of work experience in the Liberal Arts Co-operative Education Program. 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 401-0 Practicum IV
Fourth semester of work experience in the Liberal Arts Co-operative Education Program. Prerequisite: successful completion of LBRL 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 402-0 Practicum V
Optional fifth semester of work experience in the Liberal Arts Co-operative Education Program. 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 750-0 Practicum I
First semester of work experience in the Co-operative Education Program.

LBRL 751-0 Practicum II
Second semester of work experience in the Co-operative Education Program.

LBRL 752-0 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.
The requirements for an MA in liberal studies by Simon Fraser University. This course is for students choosing to satisfy part of the MA Project examination in order to satisfy the Simon Fraser requirement of a written project. Students will present two of their essays for formal presentation as part of the MA Project. The seminar will revisit the themes raised in the MA Seminar and consider the implications of these themes for the student's own research. This course must be approved by the graduate chair in consultation with the student's advisor.

LS 810-5 Self and Society
This course will examine some aspects of the relationship between selfhood, 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 some ideas of tradition and traditional 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 fundamental organizing concepts 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 898-5 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)
This course is for students who have insisted on having a substantial 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.

**LING 222. Recommended: A lower division writing intensive (W) course. 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 222 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 335-3 Topics in First Nations Language 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. A continuation of the 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 331 or equivalent credit in the same language.

**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, 220; 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 370-0 Linguistics Practicum I
First semester of work experience in the Linguistics Co-operative Education Program. Prerequisite: normally 30 credit hours, including LING 130 and 220 and three other courses in Linguistics, with a minimum CGPA of 2.75.

LING 371-0 Linguistics Practicum II
Second semester of work experience in the Linguistics Co-operative Education Program. 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 impressivistic 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 setting. Prerequisite: LING 321, 322, plus LING 301.

LING 408-3 Field Linguistics
The investigation and description of an unfamiliar language. Prerequisites: LING 221 and 222; or 310.

LING 409-3 Sociolinguistics
A systematic approach to the study of linguistic variation in different areal, social, and cultural settings. Prerequisite: LING 220 or 310, plus LING 301. Recommended: LING 260.

LING 409W-3 Sociolinguistics
A systematic approach to the study of linguistic variation in different areal, social, and cultural settings. Prerequisite: LING 220 or 310, plus LING 301. Recommended: LING 260. Writing.

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 222; or 310.

LING 432-3 Language Structures II
Detailed examination of the structure of a selected language. Prerequisite: LING 221 and 222; 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 470-0 Linguistics Practicum III
Third semester of work experience in the Linguistics Co-operative Education Program. Prerequisite: successful completion of LING 371 and 60 credit hours with a minimum CGPA of 2.75.

LING 471-0 Linguistics Practicum IV
Fourth semester of work experience in the Linguistics Co-operative Education Program. 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: 12 credit hours of upper division linguistic courses.

LING 481-3 Topics in Linguistics II
Investigation of a selected area of linguistic research. Prerequisite: 12 credit hours of upper division linguistic courses. Note: may be taken without LING 480.

LING 482-3 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.

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 808-4 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 Systems Science

MSSC 480-1 Undergraduate Seminar in Management and Systems Science
A seminar 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.

MSSC 481-1 Undergraduate Seminar in Management and Systems Science
A seminar 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.

Marine Science

MASC 401-3 Directed Studies in Marine Sciences
A course of directed studies under the supervision of a member of faculty. The course will be supervised by the student 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 406-6 Directed Studies in Marine Sciences
A course of directed studies under the supervision of a member of faculty. The course will be supervised by the student 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 809-4 Directed Research
A course of directed studies under the supervision of a member of faculty. The course will be supervised by the student 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 898-6 MA Thesis
MASC 899-6 PhD Thesis

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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. The brochure will be available from the Department of Biological Sciences.

MASC 446-6 Comparative Ethology
A comparative study of marine invertebrates (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 425-3 Ecological Adaptations of Seaweeds
The course will explore morphological, physiological, genetic and reproductive adaptations of seaweeds to their natural and man-altered environments.
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 411-6 Comparative Embryology of Marine Invertebrates
A comprehensive study of development of marine invertebrates available at the Bamfield Marine Sciences Centre including all major phyla and most of the minor phyla. Lectures will cover gametogenesis, fertilization, regeneration, cell lineage, mosaic and regulated development, larval development and metamorphosis of various groups. 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 currently defined developmental systems 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 415-3 Structure and Function in Animals
The course will focus on the structure of marine animals and their adaptations to the marine environment. Neurobiology, 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 427-3 Marine Population Ecology and Dynamics
An analytical approach to the study of marine population and marine ecosystems. Interactions of marine 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 437-3 Marine Population Ecology and Dynamics
A comprehensive study of development of marine organisms available at the Bamfield Marine Sciences Centre including all major phyla and most of the minor phyla. Lectures will cover gametogenesis, fertilization, regeneration, cell lineage, mosaic and regulated development, larval development and metamorphosis of various groups. 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 currently defined developmental systems 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 440-6 Biology of Marine Birds
The interrelationship of birds and the marine environment. Lectures will emphasize the systematic and ecological relations of birds, 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 446-6 Comparative Ethology
A comparative study of marine invertebrates (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 447-3 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.

MASC 473-3 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.

MASC 474 – 479-6 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. Course 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 laboratory and/or field opportunities offered by the Bamfield Marine Sciences Centre.

MASC 501 – 503 Special Topics Course offered, as opportunities arise, by distinguished scientists who are visiting the Bamfield Marine Sciences Centre and are prepared to offer a course extending over a three week period.

MASC 504 – 506 Special Topics Course offered, as opportunities arise, by distinguished scientists who are visiting the Bamfield Marine Sciences Centre and are prepared to offer a course extending over a six week period.

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 or honors degree requirements. Those with BC Math 12 equivalent, with a grade of at least B, may not take this course for credit.

MATH 113-3 Euclidean Geometry Plane Euclidean geometry, congruence and similarity. Designed specifically for students in the Integrated Reasoning course, and may not be counted toward the Mathematics minor, major or honors degree requirements. 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-.

MATH 121-3 Mathematical Expeditions Mathematics beyond calculus; exploration of mathematical ideas which have led to the creation of new branches of mathematics and 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; group 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-.

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.

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 151, 154 or 157 may not take MATH 150 for further credit.

MATH 151-3 Calculus I Designed for students specializing in mathematics, physics, chemistry, computing science and engineering. Logarithmic and exponential functions, trigonometric functions, inverse 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, 154 or 157 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, tests, power series, convergence and applications of power series. Convergence of sequences and series. 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, 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 in mathematics. The course is divided into several modules, each of which centers around a major application in mathematics using calculus such as logistic growth (e.g. spread of diseases), optimization (e.g. cost effective oil pipeline routing), 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-.

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-.

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, major 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. Intended to 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 say yes, then you are 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 transferable vote voting system from a “first past the post” voting system? What is the connection between Chinese dragging noodles, E. coli bacteria and interest on 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.

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
MATH 308-3 Linear Optimization
Modeling and solving optimization problems involving linear functions - theory and applications. The simplex method, duality theory and applications. Integer programming and applications. Prerequisite: MATH 232. Recommended: MACM 201. Intended to be particularly accessible to students who are not specializing in mathematics. Quantitative.

MATH 309-3 Continuous Optimization
Theoretical and computational methods for investigating the minimum of a function of several real variables with and without inequality constraints. Applications to operations research, model fitting, and economic theory. Prerequisite: MATH 232 and 251. Recommended: MATH 308. Quantitative.

MATH 310-3 Introduction to Ordinary Differential Equations
First-order differential equations, second- and higher-order linear equations, series solutions, introduction to Laplace transform, systems and numerical methods, applications in the physical, biological and social sciences. Prerequisite: MATH 152 or 155, or MATH 158 with a grade of A or B) and MATH 232. Quantitative.

MATH 311-3 Boundary Value Problems
Separation of variables for the conduction equation, the wave equations and Laplace's equation. Sturm-Liouville problems. Separation in polar coordinates. Laplace transforms. Prerequisite: MATH 252 (or 253) and 310. Quantitative.

MATH 329-3 Introduction to Analysis II
Mathematical induction. Limits of real sequences and real functions. Continuity and its consequences. The mean value theorem. The fundamental theorem of calculus. Series. Prerequisite: MATH 152 or 155. Quantitative.

MATH 251-3 Calculus III
Vector functions of a single variable, space curves, scalar and vector fields, conservative fields, line integrals, fundamental theorem for line integrals, Green's theorem. Prerequisite: MATH 152 or 155, or MATH 158 with a grade of at least B. Recommended: It is recommended that MATH 232 be taken before or concurrently with MATH 251. Quantitative.

MATH 252-3 Vector Calculus
Vector functions of a single variable, space curves, scalar and vector fields, conservative fields, line integrals, fundamental theorem for line integrals, Green's theorem. Prerequisite: MATH 152 or 155, or MATH 158 with a grade of at least B. Recommended: It is recommended that MATH 232 be taken before or concurrently with MATH 251. Quantitative.

MATH 254-3 Vector and Complex Analysis for Applied Sciences
Designed for students in the Engineering Science program. Combines a continuation of the study of vector calculus from MATH 251 with an introduction to functions of a complex variable. Vector functions of a single variable, space curves, scalar and vector fields, conservative fields, surface and volume integrals, and theorems of Gauss, Green and Stokes. Prerequisite: MATH 232 and 251. Students with credit for MATH 312 may not take MATH 252 for further credit. Quantitative.

MATH 291-2 Selected Topics in Mathematics
Topics will vary from semester to semester depending on faculty availability and student interest. Prerequisites will be specified according to the particular topic or topics offered.

MATH 292-3 Selected Topics in Mathematics
Topics will vary from semester to semester depending on faculty availability and student interest. Prerequisites will be specified according to the particular topic or topics offered.
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 to 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 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 388-3 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: MACT 202, 316; MATH 251, 308, 310; STAT 285.

MATH 418-3 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. Quantitative.

MATH 419-3 Linear Analysis
Convergence in Euclidean spaces, Fourier series and their convergence, Legendre polynomials, Hermite and Laguerre polynomials. Prerequisite: MATH 222, 320 or permission of the instructor. 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. Quantitative.

MATH 436-0 Job Practicum III
This is the third semester of work experience in a co-operative education program available to mathematics students. 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 437-0 Job Practicum IV
This is the fourth semester of work experience in a co-operative education program available to mathematics students. Prerequisite: MATH 436 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.
available computational resources, e.g. Maple.
Prerequisite: acceptance into the MSc program in mathematics education and one year of undergraduate studies. 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 Fast integer 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 MACM 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, 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 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 322. 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 MACM 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 800-4 Mathematics: Selected Topics
An intensive study of Lebesque measure, integration and the Lebesque convergence theorems together with the treatment of such topics as absolute continuity, the fundamental theorem of calculus, the $L^p$-spaces, comparison of types of convergence in function spaces, the Baire category theorem.

MATH 833-4 Analysis: Selected Topics
An introduction to the theory of fields, with emphasis on Galois theory. 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 834-4 Analytic and Diophantine Number Theory
Analytical functions, distribution of prime numbers, theory of Dirichlet characters, Dirichlet series, theory of Riemann Zeta functions and Dirichlet L-functions, exponential sums, character sums, Diophantine equations, Diophantine approximations, applications.

MATH 845-4 Number Theory: Selected Topics
An introduction to the theory of fields, with emphasis on Galois theory. 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 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, ramification, cyclotomic fields, valuations, completions, applications.

MATH 844-4 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 849-4 Selected Topics
An introduction to algebraic geometry with supporting mathematical tools. 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 891-4 Algebra: Selected Topics
Algebraic graph theory, extremal graph theory, colouring problems, path and cycle structure of graphs, application of graphs, hypergraphs, and current research topics.

MATH 892-4 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 893-4 Analysis
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, computation 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
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, computation of orbit representatives. Exact and asymptotic enumeration of labelled and unlabelled structures.

MATH 828-4 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, computation of orbit representatives. Exact and asymptotic enumeration of labelled and unlabelled structures.

MATH 829-4 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 830-4 Algebra
Algebraic graph theory, extremal graph theory, colouring problems, path and cycle structure of graphs, application of graphs, hypergraphs, and current research topics.

MATH 831-4 Real Analysis
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, computation of orbit representatives. Exact and asymptotic enumeration of labelled and unlabelled structures.

MATH 832-4 Analytic and Diophantine Number Theory
Analytical functions, distribution of prime numbers, theory of Dirichlet characters, Dirichlet series, theory of Riemann Zeta functions and Dirichlet L-functions, exponential sums, character sums, Diophantine equations, Diophantine approximations, applications.

MATH 845-4 Number Theory: Selected Topics
An introduction to the theory of fields, with emphasis on Galois theory. 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 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.
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. Prerequisites: MACM 150 or 152, and CMPT 125 (or CMPT 101 or 104 or 126) and MACM 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 512 or 155 or 158, and CMPT 125 (or CMPT 101 or 104 or 126) and MATH 232 (co-requisite). Quantitative.

MACM 311-3 Special Topics in Mathematics and Computation
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 151-0 Practicum I
First semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 221-3 Cellular Biology and Biochemistry
A study of the molecular processes which underlie cell structure and function, integrating ultrastructural, physiological and biochemical approaches. Modern techniques used in the analysis of organelle and cell function are integral parts of the courses. Prerequisite: BISC 101. Corequisite: CHEM 281 (or 150). Recommended: CHEM 281 precede MBB 221. Students with credit for BICH 221 may not take MBB 221 for further credit.

MBB 222-3 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 251-0 Practicum II
Second semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 300-1 Special Topics in Biotechnology and Business
A survey 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.
COURSES

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.

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 and characterization of GST-fusion proteins, construction of transgenes and their expression in transgenic organisms, and the 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 Genomic Analysis
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 to studying signal transduction complement each other. 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
The 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 subcellular 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 neural 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 451-0 Practicum IV
Fourth semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 452-0 Practicum V
Fifth semester of work experience in the Molecular Biology and Biochemistry Co-operative Education Program. Prerequisite: acceptance in the Science Co-operative Education Program.

MBB 490-2 Directed Study in Advanced Topics in 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 or 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 of a thesis for 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 of a thesis for the honors degree in molecular biology and biochemistry. This course is available to honors students who have not yet 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 molecular biology and biochemistry 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 readings 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 can not take both courses for credit.

MBB 506-3 Critical Research Analysis

Advanced seminar series for bioinformatics. Prerequisites: enrollment 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 can not 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 can not 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. Prerequisite: Enrolment in Graduate Diploma in Bioinformatics. This course is identical to CMPT 613 and students can not 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 viral and SNARE-mediated membrane fusion. 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 current research on expression 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 will vary from semester to semester. Recent offerings have ranged from a specific focus on studying signaling using molecular genetics in model organisms, to an examination of diverse cell biological, biochemical, and genetic approaches being used in current signal transduction research.

MBB 738-3 Human Molecular Genetics

The 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 course. Prerequisite: one introductory computer programming course (e.g. CMPT 102, 103, 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 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 mechanically complex these processes are.

MBB 744-3 Developmental Neurobiology

The course will examine recent literature on neuronal growth cones and axonal guidance. Cell culture, biochemical, and molecular genetic approaches will be emphasized in assessing the roles and functions of guidance cues. Prerequisite: MBB/BISC 331 and BISC 333 or equivalent and permission of the instructor.

MBB 801-3 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 immunology 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, radiolabeled, 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 topics 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 861-1 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 862-1 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 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 898-6 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; radiisotopes 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 systemsatics. 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; proportional 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 1-3 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 100-3 Knowledge and Reality
An introduction to some of the central problems of philosophy. Topics to be discussed include the different theories of reality; the nature and sources of knowledge; 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: relativeism 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. Breadth-Humanities.

PHIL 100W-3 Knowledge and Reality
An introduction to some of 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 120-3 Introduction to Moral Philosophy
An introduction to the central problems of ethics: for example, the nature of right and wrong, the objectivity or subjectivity of moral judgments, the relativity 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 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. Breadth-Humanities.

PHIL 12OW-3 Introduction to Moral Philosophy
An introduction to the central problems of ethics: for example, the nature of right and wrong, the objectivity or subjectivity of moral judgments, the relativity 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 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, the relationship between scientific 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 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 individuation 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 first-order 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 – 232-3 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, and 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 Mill.

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 does 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, 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 310-3 Modal Logic and its Applications
Recommended: PHIL 210, 214, or an otherwise suitable background. Quantitative.

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 history of logic. Recommended: PHIL 210, 214, or an otherwise suitable background.

PHIL 320-3 Social and Political Philosophy
An examination of an issue or selection of issues 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 central 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 science, scientific methods, theory building, classificatory systems, laws and theories, the role of observation in science, the demarcation between science and non-science, causality, the status of
PHIL 344-3 Philosophy of Language I
An introduction to the major philosophic 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 150.

PHIL 352-3 17th Century Philosophy
An examination of some central issues in 17th century-philosophy. Themes may include changing theories of causation, of the mind, and of the relation between mind and world. Historical readings will be the primary focus and may include important figures such as Descartes, Elisabeth of Bohemia, Malebranche, Spinoza, Leibniz, and Locke. Prerequisite: PHIL 100 or 151. Students who have completed PHIL 353 or PHIL 354 prior to Fall 2006 may not take this course for further credit.

PHIL 356-3 18th Century Philosophy
An examination of some central issues of 18th century philosophy. Themes may include the development of the theory of ideas and epistemology associated with it. The primary focus may include important figures such as Locke, Berkeley, Hume, and Condillac. Prerequisite: PHIL 100 or 151. Students who have completed PHIL 355 prior to Fall 2006 may not take this course for further credit.

PHIL 357-3 Topics in the History of Philosophy
Prerequisite: PHIL 100 or 151.

PHIL 421-4 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.

PHIL 421W-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 444-4 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.

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 451-4 Kant
Prerequisite: at least one of PHIL 353, 354, 355.

PHIL 451W-4 Kant
Prerequisite: at least one of PHIL 353, 354, 355. Writing.

PHIL 455-4 Contemporary Issues in Epistemology and Metaphysics
Prerequisite: two 300 division PHIL courses.

PHIL 455W-4 Contemporary Issues in Epistemology and Metaphysics
Prerequisite: two 300 division PHIL courses. Writing.

PHIL 467-4 Seminar II
Prerequisite: two 300 division PHIL courses.

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.

PHYS 101-3 General Physics I
A general survey course for life science students. Kinematics and dynamics, including rotational motion; fluids, properties of matter and thermal physics. 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 151, 154 or 157 must precede or be taken concurrently. Students with credit for PHYS 120, 125 or 140 may not take PHYS 101 for further 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. Quantitative/Breadth-Science.

PHYS 102-3 General Physics II
A general survey course for life science students. Waves and optics; electricity and magnetism; modern physics emphasizing radioactivity. Prerequisite: PHYS 101 or 120 or 125 or 140. Students with credit for PHYS 121, 126, or 141 may not take PHYS 102 for further credit. Recommended corequisite: MATH 152, 155 or 158 should precede or be taken concurrently. Students are encouraged to take PHYS 130 at the same time as PHYS 102. 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. Quantitative/Breadth-Science.

PHYS 120-3 Mechanics and Modern Physics
A general calculus-based introduction to mechanics. Topics include translational and rotational motion, momentum, energy, gravitation, and selected topics in modern physics. 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 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. Quantitative/Breadth-Science.

PHYS 121-3 Optics, Electricity and Magnetism
A general calculus-based introduction to electricity, magnetism and optics. Topics include electricity, magnetism, simple circuits, optics and topics from applied physics. Prerequisite: PHYS 120 or 125 or 140 (or PHYS 101 with a grade of A or B). Students with credit for PHYS 102, 126 or 141 may not take PHYS 121 for further credit. Corequisite: MATH 151 or 155 must precede or be taken concurrently. Students with credit for PHYS 101, 120 or PHYS 140 may not take PHYS 125 for further credit. Quantitative.

PHYS 125-3 Mechanics and Special Relativity
Newtonian mechanics and special relativity for students with good preparation in physics and mathematics. Topics include Newtonian particle mechanics, angular momentum, torque, conservation laws, gravitation, and special relativity. Prerequisite: Greater than 85% in both BC Principles of Mathematics 12 and BC Principles of Physics 12, or a grade of A in PHYS 100, or equivalent. Corequisite: MATH 151 or 154 must precede or be taken concurrently. Students with credit for PHYS 101, 120 or PHYS 140 may not take PHYS 125 for further credit. Quantitative.
be taken concurrently. Students with credit in PHYS 102, 121 or 141 may not take PHYS 126 for further credit. Quantitative.

PHYS 130-2 General Physics 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 may precede; 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 126 should be taken concurrently or may proceed; 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 151 or 154 must precede or be taken concurrently. Students with credit for PHYS 126 or 120 or 110 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 lecture-laboratory environment. Topics include electricity, magnetism, simple circuits, optics and topics from applied physics. Prerequisite: PHYS 140. Corequisite: MATH 152 or 155 must precede or be taken concurrently. Students with credit for PHYS 126, 121 or 102 may not take PHYS 141 for further credit. Quantitative/Breadth-Science.

PHYS 190-3 Introduction to Astronomy
Historical astronomy, telescopes, the sun and the solar system, stellar evolution, galaxies, and cosmology. Quantitative/Breadth-Science.

PHYS 192-3 Logarithm and Blues
An exploration of the production, propagation and perception of sound and music from an interdisciplinary perspective. The viewpoints of a professional musician and a physicist will be presented and compared. Topics include elementary acoustics, instrument characteristics, reproduction technologies, tonal anomalies and perception. Breadth-Science.

PHYS 211-3 Intermediate Mechanics
An intermediate mechanics course covering kinematics, dynamics, calculus of variations and Lagrange’s equations, non-inertial reference frames, central forces and orbits, and rigid body motion. Prerequisite: PHYS 126 or 121 or 141, Corequisite: MATH 251 and 232. Recommended: MATH 310 and PHYS 255. Quantitative.

PHYS 221-3 Intermediate Electricity and Magnetism
Electrostatics, magnetostatics, capacitance, inductance, DC and AC circuits, concepts of electric and magnetic fields, and Maxwell’s equations. Prerequisite: PHYS 126 or 121 or 141, MATH 251. Recommended corequisite: MATH 252 or 254. Quantitative.

PHYS 231-3 Physics Laboratory II
Introductory physics laboratory with experiments chosen from mechanics, heat, optics, electricity, magnetism, properties of matter, atomic and nuclear physics, along with lectures on the use of computers for data acquisition and data analysis in the physics laboratory. Prerequisite PHYS 131 or 130. Students who have successfully completed PHYS 234 may not receive additional credit for this course. Quantitative.

PHYS 233-2 Physics Laboratory III
Experiments chosen from among mechanics, heat, optics, electricity, magnetism, properties of matter, atomic and nuclear physics. Engineering Science students will do a selected set of experiments. Prerequisite: PHYS 231. Quantitative.

PHYS 253-3 Vibrations and Waves
The physics of vibrations and waves. Topics include periodic motion, including free and forced oscillations, coupled oscillators, normal modes, and waves in one and higher dimensions. Prerequisites: PHYS 126 or 121 or 141; or PHYS 101 and 102 with a grade of B or better. Corequisite: MATH 232 and 251. Recommended concurrent: PHYS 211 and MATH 310. Quantitative.

PHYS 285-3 Introduction to Relativity and Quantum Mechanics
Special relativity, including relativistic kinematics and dynamics; tests of relativity; matter waves and early quantum mechanics; wave mechanics and its application to molecular, atomic and subatomic systems. Prerequisite: PHYS 255. Quantitative.

PHYS 324-3 Electromagnetics
Electromagnetics, magnetostatics, electromagnetic waves, transmission lines, waveguides, antennas and radiating systems. Prerequisite: PHYS 221, MATH 252. Quantitative.

PHYS 326-4 Electronics and Instrumentation
Circuits and circuit theory, passive and active devices, amplifiers, feedback, modern measurement techniques and instrumentation. Prerequisite: PHYS 221 and 231. Quantitative.

PHYS 332-3 Optics Laboratory
Experiments in optics and modern physics, including diffraction, interference, spectroscopy, lasers and holography. Engineering Science students will do a selected set of experiments. Prerequisites: PHYS 233 and 285, or equivalent. Quantitative.

PHYS 332W-3 Optics Laboratory
Experiments in optics and modern physics, including diffraction, interference, spectroscopy, lasers and holography. Engineering Science students will do a selected set of experiments. Prerequisites: PHYS 233 and PHYS 285, or equivalent. Writing/Quantitative.

PHYS 335-0 Practicum I
This is the first of two 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. Prerequisite: completion of 30 credit hours, with a minimum GPA of 2.75 in the physics program. 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 336-0 Practicum II
This is the second 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. Prerequisite: PHYS 335 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 344-3 Thermal Physics
Heat, temperature, heat transfer, kinetic theory, laws of thermodynamics, entropy, heat engines, applications of thermodynamics to special systems, phase transitions. Prerequisite: PHYS 126 or 121, MATH 251. Quantitative.

PHYS 346-3 Energy and the Environment
The physical principles and limitations of renewable energy source utilization and energy conversion. A qualitative introduction to energy conversion and storage systems, including: wind, tidal, geothermal, hydroelectric and nuclear power, hydrogen technology, electrical and mechanical energy storage. Prerequisite: CHEM 120 or PHYS 102 or 121 or 126, MATH 155 or 152. Quantitative.

PHYS 347-3 Introduction to Biological Physics
A physics perspective on cellular structure and composition; random walks and diffusion; properties of fluids, cell motion; entropy and the properties of soft materials; structure and function of proteins; signal propagation in nerves. Prerequisite: Completion of 45 credit hours including BISC 101, CHEM 122, MATH 152 (or 155), PHYS 121 (or 102, 126, or 141). Quantitative.

PHYS 355-3 Optics
Geometrical and physical optics, interference, diffraction, polarization, coherence, spectra, optical instruments. Prerequisite: PHYS 221 and MATH 252. Quantitative.

PHYS 365-3 Semiconductor Device Physics
Structure and properties of semiconductors, semiconductor theory, theory and operation of semiconductor devices, semiconductor device parameters, and their dependence on device design. Prerequisite: PHYS 221. Recommended: PHYS 285. Quantitative.

PHYS 380-3 Introduction to Subatomic Physics
Comprehensive overview of nuclear and particle physics with emphasis on concepts: the constituents of matter and the fundamental forces; properties and structure of nuclei and the nucleon; the Standard Model; experimental techniques. Prerequisite: PHYS 285 or CHEM 260 or NUSC 341. Quantitative.

PHYS 384-3 Methods of Theoretical Physics I
Applications of mathematical methods in physics, differential equations of physics, eigenvalue problems, solutions to wave equations. Prerequisite: PHYS 211 (or MATH 263), PHYS 221, MATH 252, MATH 310. Quantitative.

PHYS 385-3 Quantum Mechanics
Wave mechanics and the Schroedinger equation, the harmonic oscillator, introduction to bra and ket notation, angular momentum and spin, the hydrogen atom, atomic structure, time-independent perturbation theory, atomic spectra, and applications. Prerequisite: PHYS 211, 221, 285, MATH 252. PHYS 285 may be waived by permission of the department. Engineering science students are exempt from the PHYS 285 prerequisite. Corequisite: MATH 310 must precede or be taken concurrently. Quantitative.

PHYS 390-3 Introduction to Astrophysics
Characteristics of stars and their evolution, thermodynamics of stellar interior, origin of the elements, galaxies, cosmology, and origin of the planets. Prerequisite: PHYS 211 and either CHEM 120 or 121. Quantitative.

PHYS 395-3 Computational Physics
Computer-based approaches to the solution of complex physical problems. A partial list of topics includes: Monte-Carlo and molecular dynamics techniques applied to thermal properties of materials; dynamical behavior of conservative and dissipative systems, including chaotic motion; methods for ground state determination and optimization, including Newton-Raphson, simulated annealing, neural nets, and genetic algorithms; the analysis of numerical data; and the use of relevant numerical libraries. Prerequisite: MATH 310, PHYS 211, CMPT 101 or 102. Recommended: PHYS 344 (or PHYS 244) or equivalent. Quantitative.
PHYS 431-3 Advanced Mechanics
Central forces, rigid body motion, small oscillations. Lagrangian and Hamiltonian formulations of mechanics. Prerequisite: PHYS 384 or permission of the department. Physics majors may enter with MATH 252, 310 and either PHYS 211 or MATH 263. Quantitative.

PHYS 415-3 Quantum Mechanics II
Foundations of quantum mechanics, time-dependent perturbation theory, radiation, variational methods, scattering theory, advanced topics, and applications. Prerequisite: PHYS 385 and either PHYS 384 or MATH 314 and 419. Quantitative.

PHYS 425-3 Electromagnetic Theory
Electrostatics and boundary value problems, magnetic fields, Maxwell equations and their relativistic formulation, radiation and propagation of electromagnetic waves. Prerequisite: PHYS 385, 384 (or PHYS 221 and MATH 314). 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 investigation of Brownian motion, molecular order and biological 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 309, PHYS 344 or MBB 323 or CHEM 360, or permission of the department. Quantitative.

PHYS 435-0 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. 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 P/W basis.

PHYS 437-0 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. 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 Applied Optics
Interaction between light and matter, population inversion, stimulated emission, optical resonators, temporal and spatial coherence, gain and power output of laser oscillators. Selected topics in applied optics such as crystal optics, light modulation, fibre optics, non-linear optics and opto-electronic devices and components. Applications of lasers. Prerequisite: PHYS 355 and 385. Quantitative.

PHYS 463-3 Solid State Physics
Crystal structure, lattice vibrations and thermal properties of solids, free electron model, band theory, and applications. 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 260 or 361 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 solution, 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. Quantitative.

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 801-3 Fundamental Quantum Mechanics
Review of foundations of quantum mechanics, states and observables, measurement theory, angular momentum, time reversal, stationary and time dependent perturbation theory, variational methods. Course offered regularly. Prerequisite: PHYS 415, or equivalent.

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 band laws, phonons, semiconductors. Course offered regularly. Prerequisite: PHYS 465 or equivalent, and PHYS 415.

PHYS 882-3 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 883-3 Special Topics III
PHYS 884-2 Special Topics IV
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. Breadth-Social Sciences.

POL 151-3 The Administration of Justice
The development of laws and their application to the citizen and social groups. 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 151 or permission of department. Students with credit for POL 213 or SA 255 may not take POL 201 for further credit. Quantitative.

POL 210-3 Introduction to Political Philosophy
An examination of concepts presented by the major political thinkers of the western world. The course surveys those ideas which remain at the root of our political institutions, practices and ideals against a background of the periods in which they were expressed. Prerequisite: POL 100 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 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 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 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. 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 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 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 permission of 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 151 or permission of department.

POL 252-3 Local Democracy and Governance
The political process in the urban municipality from a comparative perspective. Prerequisite: POL 100 or 151 or permission of department. Breadth-Social Sciences.

POL 290-0 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. Prerequisite: 30 credit hours with a CGPA of 3.0. Transfer students must complete at least 15 credit hours at Simon Fraser University.

POL 291-0 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. Prerequisite: POL 290; 45 credit hours with a CGPA of 3.0.

POL 301-0 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. 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 equivalent, 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: six lower division credits in political science or permission of the department. 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 have played 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 lines of analysis 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 336-4 Government and Politics: People’s Republic of China II
An analysis of China’s current constitutional structure, modernization program, post cultural revolution period, and development in both domestic and international affairs. Emphasis will be placed on explanations of change and perspectives for future development. Prerequisite: six lower division credits in political science or permission of the department.

POL 337-4 Government and Politics: Selected Latin American Nations I
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: Imperialism, federation, association. 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 Corporations
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
A practical analysis of the structures and processes surrounding contemporary 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. This focus will be on both paid and unpaid labor; 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 (eg. 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 382-4 The 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. 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 political philosophy, with an emphasis on contemporary 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 R. Moore, Jr., Huntington, Apt, Fried. and 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 tests, 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 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 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. Quantitative.

POL 428-4 Selected Topics in Canadian Government and Politics
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 issues of comparative and theoretical importance, 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 emergence and development of communist political systems and also the impact of that experience on the various post-communist successor states undergoing the process of regime transition in Eurasia and eastern Europe. The course will focus on theoretical issues pertaining to the topics considered, and case studies of specific countries. 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 preconditions for democracy, the role of military governments, the processes of reform 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 435-4 Comparative Federal Systems
Comparative analysis of federations such as the Canadian, American, West German, Yugoslav, 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 issue areas such as economics, security, human rights, basic needs (health and environment), it considers alterations in 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 international relations between the national and other levels of government 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
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, foreign 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 political economy 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 global political role of civil society in international trade. Prerequisite: eight upper division credit hours 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 for nuclear weapons. 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 the 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 Community Agricultural Policy and the 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 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 458-4 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 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 production 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; CGPA of 3.0; upper division 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 502-5 Political Research: Design and Analysis

POL 505-5 Issues in Social and Economic Development

POL 507-5 Issues in Comparative Politics

POL 512-5 Seminar in Modern Political Theory

POL 514-5 Normative Political Theory

POL 521-5 Canadian Government and Politics

POL 525-5 Canadian Political Economy

POL 526-5 Parties and Ideologies in Canada

POL 527-5 Issues in Canadian Government and Politics

POL 529-5 Internship

POL 530-5 Comparative Government and Politics

POL 532-5 Communist and Post-Communist Countries

POL 537-5 Issues in Comparative Politics

POL 548-5 Government and Politics of Industrialized Countries

POL 549-5 Government and Politics of Developing Countries

POL 541-5 International Relations

POL 542-5 International Law and Organizations

POL 543-5 Canadian Foreign Policy

POL 544-5 International Political Economy

POL 545-5 Foreign Policy Analysis

POL 546-5 International Security Studies

POL 549-5 Issues in International Relations

This is a selected topics course.

POL 551-5 Canadian Policy in Canada

POL 552-5 Urban Government and Politics

POL 553-5 Public Administration

POL 555-5 Science, Technology and Public Policy

POL 556-5 Issues in Social and Economic Policy

POL 561-5 Issues in Political Development

Students with credit for POL 837-5 may not take this course for further credit.

POL 590-0 PhD Seminar

POL 591-0 Master’s Seminar

POL 592-6 Research Project

POL 593-5 Readings in Political Sciences

POL 594-5 Readings in Political Science II

POL 595-6 Extended Essays

POL 596-6 PhD Comprehensive Exam

POL 597-6 Field Exam in Major Areas of MA Concentration

POL 598-6 MA Thesis

POL 599-6 PhD Thesis Research

Population and Public Health PPH
Faculty of Health Sciences

PHH 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.

PHH 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.
**PHP 823-3 Analysis of Health Care Delivery Systems**
Components of health care systems, issues, and interactions between components. System outputs, medical services and the 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 880-0 Practicum**
Students participate in a workplace practicum placement. Graded satisfactory/unsatisfactory.

**PPH 897-3 Seminar in Workplace Integrated Learning**
Capstone requirement for the practicum stream in the MSc in Population and Public Health. Student prepares and presents a report on the practicum completed in PPH 880. Discussion and constructive critique by the class follow, along with analysis of the methodology and tools used, their strengths, weaknesses, and confounders, and an examination of what is novel and what represents the cutting edge of technology in the specific working environment considered. The seminar weaves all opinions and insights in a final practicum overview, which integrates what was learned into a common conceptualization of the relevant health theory and methodology. Graded IP/CO. Prerequisite: PPH 880.

**Psychology PSYC Faculty of Arts and Social Sciences**

**PSYC 099-3 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, Breath-Science.

**PSYC 099W-3 Brain, Mind and Society**
Narcoses 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. Breath-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 abnormal psychology are considered. Prerequisite: PSYC 100. Students with credit for PSYC 101 may not take PSYC 102 for further credit. Breath-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. Breath-Social Sciences.

**PSYC 201-4 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. Quantitative.

**PSYC 21W-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 206-3 Introduction to Psychological Assessment**
A survey of selected techniques for assessment of individual and group differences in aptitudes, abilities, achievement, attitudes, interests, and personality. Emphasis is placed on evaluating the effectiveness of various techniques, including performance tests, self-report questionnaires, inventories and projective approaches. This course provides a suitable introduction for students considering graduate training in clinical psychology. Prerequisite: PSYC 201 and one of PSYC 241 (or 340) or 270 (or 370). Students with credit for PSYC 306 may not take PSYC 206 for further credit.

**PSYC 207-3 Introduction to History of Psychology**
Examines the development of modern psychology from the foundation of the first laboratories in the late 19th century to the present. The development and revisions of the major theoretical systems of psychological research are examined from a comparative and critical perspective. Prerequisite: PSYC 102. 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 adulthood. 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; group 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. Topics include: 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 368 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.

**PSYC 300-3 Critical Analysis of Issues in Psychology**
Trains students to evaluate critically important issues from the main area 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.

**PSYC 300W-3 Critical Analysis of Issues in Psychology**
Trains students to evaluate critically important issues from the main area 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.
COURSES

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 and one of 221 (or 320) or 335.

PSYC 307-3 History of Psychology in Western Scholarship
Examines the development of psychological thought through theories of ontology, epistemology and ethics that laid the foundations for modern psychology. Provides a background for psychology courses by analysing how various viewpoints on the mind-body relationship, epistemology, rationalism and the nature of science contributed to the development of modern psychology. Prerequisite: PSYC 201 and 207.

PSYC 311-4 Psychological Measurement
Deals with basic problems in the development of psychological measures. Treatment of the concepts of reliability and validity and the application of these concepts in experimental and observational research. Implications of measurement principles for the design of studies and experiments. Introduction to classical and contemporary methods in different content areas. Prerequisite: PSYC 201, 206 (or 306) and 301.

PSYC 321-3 Individual Differences in Cognitive Abilities
Surveys theoretical models and applied research on the nature of individual differences in cognitive abilities. Topics will include measurement, the biological and psychosocial origins of cognitive abilities, the relations between cognitive abilities and other behavior, and the social implications of different models of cognitive abilities. Prerequisite: PSYC 201 and 221 (or 320).

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 newborn to the elderly. Prerequisite: PSYC 201 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 physiological measurement of sensations, cross-modal organization and computational modeling of sensory processes, and the interface between sensory and perceptual processes. Prerequisite: PSYC 201 and one of 280 or 303.

PSYC 342-0 Practicum I
First semester of work experience in the Psychology Co-operative Education program. Prerequisite: PSYC 201 and 210. Students should apply to the co-op co-ordinator one semester in advance.

PSYC 343-0 Practicum II
Second semester of work experience in the Psychology Co-operative Education program. Prerequisite: successful completion of PSYC 342-0 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. Traces 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 bio-social point of view. Included among the topics are psychological effects of sexual maturation, choice of vocation and occupation, and other factors that affect participation in 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 outcomes 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; environmental 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, small group discussions and handout 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 pragmatic concepts to social interaction 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 361-3 Social Cognition
Reviews theory and research on the cognitive basis of interpersonal perception and behavior, with an underlying focus on basic processes of attention, memory and inference. Topics include architecture of memory, heuristics and biases, automaticity, probabilistic reasoning, co-variation detection, causal inference, trait inference. Such processes are used to understand self-perception, emotions, goal directed behavior, impression formation, stereotyping and prejudice, and cultural differences. Prerequisite: PSYC 201 and 280 (or 360).

PSYC 362-3 Interpersonal Relations
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 365-3 Health Psychology
Examines 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 350).

PSYC 368-3 Contemporary Issues in Psychology and Law
Topics include children in the courts, autobiographical memory in legal contexts; risk assessment; civil forensic, and offender treatment. Prerequisite: PSYC 201, 268. Students with credit for PSYC 369 prior to 2005-3 will have satisfied the PSYC 268 requirement.

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 206 (or 306), 241 (or 340), or 270 (or 370). Students with credit for PSYC 375 may not take PSYC 371 for further credit.

PSYC 381-3 Behavioral Endocrinology
Examines the ways in which hormones influence the nervous system, regulating essential behaviors such as eating, drinking, sex, parenting, sleep, emotional behavior and cognitive processes. Prerequisite: PSYC 201 and 280.

PSYC 382-3 Cognitive Neuroscience
Examines the neurophysiological bases of cognitive and perceptual phenomena such as memory, attention, language, thinking, imagery, vision, audition, and sensory processes. The study of human cognitive performance with measurement techniques such as ERP, PET, and fMRI is also discussed. Prerequisite: PSYC 201 and 280.

PSYC 383-3 Psychopharmacology
A survey of how psychoactive drugs affect brain function to alter consciousness and behavior. Topics will include cellular effects of drugs that affect the central nervous system and other effects of the psychological and social effects of these drug-induced changes in the brain. Research on drug abuse and addictions and means of treating them will be covered. Historical, social and legal aspects of non-medical drug use will be included, as will the use of medications for the treatment of anxiety, depression, schizophrenia, delirium and other 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.

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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 neuromorbidity, neuropathology, brain damage, neurological diseases (e.g., schizophrenia, Alzheimer's, Parkinson's), and problems of spatial ability, memory, language, mood, and anxiety. Prerequisite: PSYC 201 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 485 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 the current wave of psychology or the major approaches to theoretical issues that are relevant to their area of interest in psychology. Prerequisite: PSYC 201, and one of 207 (or 308) or 307 and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

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. Particular emphasis is given to the relative merits of the several designs. Whenever possible we use research questions to be answered. Prerequisite: PSYC 201, 210, 301 and 60 hours of credit with a CGPA of 3.0 or 90 hours of credit with a CGPA of 2.5. Quantitative.

PSYC 411-4 Research Design II
Focuses on multivariate regression and correlation models. Deals with ways of answering 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 of 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, 311 and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5. Recommended: PSYC 410 and 411.

PSYC 430-4 Selected Topics in Cognition I
Prerequisite: PSYC 201, 210, 221 (or 320), and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 432-4 Selected Topics in Cognition II
Prerequisite: PSYC 201, 210, 221 (or 320) and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

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 442-0 Practicum III
Third semester of work experience in the Psychology Co-operative Education program. Prerequisite: successful completion of PSYC 342 and 343 and 60 semester hours with a minimum CGPA of 3.0.

PSYC 443-0 Practicum IV
Fourth semester of work experience in the Psychology Co-operative Education program. 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) and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 451-4 Selected Topics in Developmental Psychology II
Prerequisite: PSYC 201, 210, 250 (or 350 or 351) and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 452-4 Selected Topics in Developmental Psychology III
Prerequisite: PSYC 201, 210, 250 (or 350 or 351) and 60 hours of credit and CGPA of 3.0 or 90 hours of credit and CGPA of 2.5.

PSYC 461-4 Selected Topics in Social Cognition
Prerequisite: PSYC 201, 210, 260 (or 360), 361 and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 462-4 Selected Topics in Interpersonal Relationships
Prerequisite: PSYC 201, 210, 260 (or 360), 362 and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 468-4 Selected Topics in Psycholinguistics
Prerequisite: PSYC 210, PSYC 368 (or PSYC 369) and 60 hours of credit and a CGPA of 3.0. Students with credit for PSYC 469 may not take this course for further credit.

PSYC 480-4 Selected Topics in Biological Psychology I
Prerequisite: PSYC 201, 210, 280, and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

PSYC 482-4 Selected Topics in Biological Psychology II
Prerequisite: PSYC 201, 210, 280 and 60 hours of credit and a CGPA of 3.0 or 90 hours of credit and a CGPA of 2.5.

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 493-3 Directed Studies
Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: Permission of the department. See the Directed Studies Courses section within the undergraduate Department of Psychology section.

PSYC 494-3 Directed Studies
Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: Permission of the department. See the Directed Studies Courses section within the undergraduate Department of Psychology section.

PSYC 495-3 Directed Studies
Independent reading or research in topics selected in consultation with the supervising instructor. Prerequisite: 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 600-3 Biological Bases of Behavior

PSYC 601-3 Cognitive and Affective Bases of Behavior

PSYC 602-3 Developmental and Social Bases of Behavior

PSYC 603-3 Individual Differences

PSYC 700-3 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 804-4 Seminar in Evaluation

PSYC 806-3 Advanced Topics in Assessment
Prerequisite: PSYC 820, 821, 822, 823, 824, or permission of the instructor.

PSYC 807A-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 807B-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 807C-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 807D-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 807E-3 Advanced Topics in Intervention: Cognitive-Behavior Therapy
Conceptual and theoretical issues in Cognitive Behavior therapy. Prerequisite: PSYC 820, 821, 822, 823, 824 or permission of the instructor.

PSYC 808-3 Advanced Topics in Evaluation
Prerequisite: 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 833-3 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
Prerequisite: permission of the instructor.

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 in Law and Psychology/Forensic Psychology
Prerequisite: PSYC 790.

PSYC 898-6 MA Thesis
PSYC 899-6 PhD Thesis
PSYC 903-3 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: Psychopathology
PSYC 907F-3 Advanced Topics in Biological Psychology: Cognitive Neuroscience
PSYC 910-3 Research Design I: Experiments
PSYC 911-3 Research Design II: Research Studies
PSYC 912-1.5 Research Seminar
PSYC 913-1.5 Research Seminar
PSYC 914-1.5 Research Seminar
PSYC 915-3 Seminar in Measurement
PSYC 916-1.5 Research Seminar
PSYC 917-1.5 Research Seminar
PSYC 918-1.5 Research Seminar
PSYC 920-3 Seminar in Learning
PSYC 925-3 Seminar in Cognitive Processes
PSYC 930-3 Seminar in Perception
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 and 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.

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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 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 distinctive nature of publishing as a cultural/communication 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 underpinnings 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 their theoretical and their attained competencies 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 titles they design 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. Design mockups 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 prototype 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 emerging publishing 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)

PUB 898-6 Internship Project Report Supervision and Evaluation
Students complete their internship project report and work with their supervisory committee to bring it to a final acceptable form.

PUB 899-6 Publishing Internship or Project
Students are placed in an applied setting. 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 two reports: the first, a work report which will be an appraisal of the student's work experience, and the second, a project report which will be an investigation and analysis of a particular problem or case. Prerequisite: admittance to the program.

Resource and Environmental Management REM
Faculty of Applied Sciences

REM 100-3 Global Change
This course provides students with an overview of global environmental change and its causes from a social science perspective, historically and at the present time. Population growth, an increasing ecological footprint and changes in ideology, social organization, economy and technology will be critically reviewed. New ways of thinking in natural and social science will be considered in relation to specific issues such as land, soil and food; energy, raw materials and solid waste; air pollution and transportation; water, oceans and fisheries; climate change; forestry and biodiversity; urbanization, and alternative futures. Breadth-Social Sciences.

REM 311-3 Applied Ecology and Sustainable Environments
Students will learn to apply the ecological concepts introduced in prerequisite courses to applied ecological problems at the population, community, and ecosystem levels of organization. Emphasis will be placed on processes which drive ecological dynamics, on recognizing those processes and dynamics in applied contexts, and on interpreting ecological data. Prerequisite: REM 100 or EVSC 200, BISC 204 or GEOG 215, STAT 101 or GEOG 251 or equivalent. Quantitative.

REM 356-3 Institutional Arrangements for Sustainable Environmental Management
This course provides an overview of some basic legislation, agencies, and policies which currently are in use to regulate the natural environment at the international, nation, provincial, regional, and local levels. Its purpose is to present a basic set of evaluative questions which can be used to address the effectiveness and efficiency of the environmental regulatory and management systems currently in use. Prerequisite: REM 100.

REM 412-3 Environmental Modeling
Students receive hands-on experience in the construction and analysis of computer simulation models of environmental and ecological systems and problems. Prerequisite: BISC 204, REM 100 or EVSC 200, MATH 151 or 154 or 157, MATH 152 or 155, STAT 101 or 103 or 301 or equivalent. Quantitative.

REM 445-3 Environmental Risk Assessment
Students receive theory and practical experience in the control and management of hazardous substances in the environment. This includes the application of techniques used to assess toxicological, ecological and public health risks of contaminants within the current regulatory framework. Prerequisite: MATH 151, 154, or 157; STAT 101, 103, or 301 or GEOG 251.

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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 318

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 are drawn from natural science or economics. Not for credit toward a PhD in resource and environmental management.

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 simulation. 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 ecology of fisheries. 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 productivity and status 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 management.

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 managers, the public, 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 morphology of drainage basins and rivers; 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 resource data. Topics include air photo interpretation, multi-band photography, thermal infrared imagery, satellite imagery, orthophotography, photogrammetric 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 use of parks, forests, and protected 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 considerations 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
co-ordinator.

Students must have completed at least one Resource and Environmental Management's Co-operative Education Program. Resource and Environmental Management's First semester of work experience in the School of equivalent course, or permission of instructor.

REM 671-5 Forest Ecology
instructor.

are illustrated with reference to contemporary forestry economics, policy and social management. Principles 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 661-5 Special Topics in Resources Management

Special Topics in areas not currently offered within the offerings of the resource and environmental management program. REM 662 – 663-5 Special Topics in Resource 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 co-ordinator.

REM 698-3 Field Resource Management Workshop
An intensive field course introducing students to the diversity of issues and viewpoints concerning management of resource; 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 REM 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 topic 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, Breithaupt-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 modern 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. Breath-Emile-Berton Centre.

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. Breath-Emile-Berton Centre.

SA 141-0 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. Prerequisite: 29 semester credit hours with a minimum cumulative GPA of 2.75 including SA 101 or 150 and SA 255. 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 150-4 Introduction to Sociology (S)
The study of basic concerns of sociology, such as social order, social change, roles, conflict and social inequality. Breath-Emile-Berton Centre.

SA 201-4 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.

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 social inequalities. Focus will be on different forms that violence assumes in war and peace and how acts of violence are remembered, collectively denied or recognized. Particular case 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 canvasses 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 as 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 in 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 241-0 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. 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 co-ordinator 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 within a range 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 213 may not take SA 255 for further credit.

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 (SA)  
An introduction to the societies of a selected region of Asia. They will 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 ethnographic 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 (SA)  
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 ethnography. The course will address 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 302-4 Global Problems and the Culture of Capitalism (SA)  

SA 302W-4 Global Problems and the Culture of Capitalism (SA)  
An introduction to the political economy and culture of capitalism in transitional societies. Case studies may focus on issues of population, famine, disease, poverty, environmental destruction, social inequality, and nation-state violence. Resistance, rebellion and social movements in response to these problems will be addressed. Highly recommended: SA 101 or 150. Students who took SA 294 in 03-1, 04-1 and 04-2 may not take SA 302 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 given 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 impact of tourism on social and cultural institutions 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 inquiry into the social 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.

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 in contemporary society. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 323-4 Symbol, Myth and Meaning (A)  
An examination of myth, symbolism, ritual and cosmological systems. Anthropological theories of magic, possession, witchcraft, healing and religious movements analyzed in ethnographic context. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293.

SA 325-4 Political Sociology (S)  
An examination of the relations of power and authority. This course will analyze the interrelations of family, church, class, interest groups, etc., particularly as they influence and are influenced by the state. The relations of law and ideology to the structures of government will form the context for this analysis. The course may also focus on broad theoretical questions of contemporary political interest. Prerequisite: SA 150 and one second year sociology (S) or sociology/anthropology (SA) course.

SA 326-4 Ecology and Social Thought (S)  
An examination of recent social thought that is concerned with environmental and ecological themes. It will address a selection from the following themes: technology evaluation; technology and science as ideology; ecology and social inequality; the concepts of ecosystem, environment and wilderness; the social and relationship politics of environmental uses; environment and the economy. Prerequisite: SA 250 or equivalent second year course in a cognate discipline.
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 movements (e.g. gender, ethnicity, 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. Aspects 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 308 may not take SA 335 for further credit. 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 250, or consent of 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: Either SA 101 or 150 and one other lower division (A) course.

SA 341-0 Sociology and Anthropology Practicum III
This is the third semester of work experience in the Co-operative Education Program in sociology and anthropology. The work experience will be focused in a specialized area of the student’s choice. Prerequisite: successful completion of SA 241 and normally the completion of at least 61 semester 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 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 SA 201 or 203.

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 relationship between sport, 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 qualitative field methods, including participant observation, interviewing, archival research, cross-cultural research, life histories, network analysis, mapping, and ethical problems of fieldwork. Prerequisite: SA 255 and 101 or 201.

SA 356-W 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 255 and 101 or 201. Writing.

SA 357-4 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. Recommended: SA 355.

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 designation will 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 361-4 Gender, Colonialism, Post-Colonialism (SA)
An ethnographically grounded study of the social and cultural construction of gender, and the ways in which it is experienced and embodied in the colonial and post-colonial world. The socio-historical conjunctures affecting women and men across the world will be explored at multiple sites: health, economy, media, law, development, policy, among others. Central to these concerns is the understanding of gender as a process and identity formulated at intersecting fields of knowledge and power. Prerequisite: SA 101 or 150. Highly recommended: SA 203. Students who have taken SA 435 prior to 2005-3 or 463 prior to 1999 may not take SA 361 for further credit.

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 and 101 or one of SA 201, 263, 286 or 293. Recommended: SA 263.

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SA 364-4 Urban Communities and Cultures (SA)
Anthropological approaches to urbanization, the nature of the city as a social system, and urban cultures. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293. Students with credit for SA 464 may not take SA 364 for further credit.

SA 365-4 Selected Regional Areas (SA)
An examination of selected aspects of the social structure, culture and the processes of social change in various regions. The focus will vary from semester to semester. Prerequisite: SA 101 and an appropriate second year course or consent of the instructor.

SA 371-4 The Environment and Society (SA)
An examination of environmental issues in their social context. Environmental issues are on the leading edge of contemporary public concern and public policy debates. This course will examine such issues as the relationship between social organization and mode of subsistence, the politics of hunger, and the way in which human societies in their particular social, historical, and cultural contexts view and interact with the natural world. Content may differ from semester to semester. Prerequisite: SA 150 and one 200 level sociology (S) or sociology and anthropology (SA) course.

SA 386-4 The Ethnography of Politics (SA)
An examination of the ways in which ethnographers seek to understand a world experiencing profound changes in the relationships between governments and the societies they govern. Topics to be considered may include: relations between indigenous peoples and governments; the social and cultural dynamics of public policy making; the articulation of human rights issues. The focus of the course will vary from semester to semester. Prerequisite: SA 101 and one of SA 201, 286 and 293.

SA 388-4 Comparative Studies of Minority Indigenous Peoples (SA)
The social and cultural patterns of aboriginal populations within various modern nation-states. Their relations with majority societies and with other indigenous groups across the world. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293.

SA 392-4 Latin America (SA)
An introduction to the peoples and institutions of Latin America in historical and contemporary perspective, emphasizing macro-level patterns of similarity and diversity. Prerequisites: SA 101 and one of SA 201, 263, 286 or 293. Students with credit for SA 391 may not take this course for further credit. This course is identical to LAS 392 and students cannot take both courses for credit.

SA 396-4 Selected Regional Areas (SA)
An examination of selected aspects of social structure, culture and processes of social change in a specific regional area. The focus will vary from semester to semester. Prerequisite: SA 101 and one of SA 201, 263, 286 or 293.

SA 400-4 Canadian Ethnic Minorities (SA)
An analysis of specific Canadian ethnic minorities. The groups will be studied in the context of the wider literature of race relations and ethnicity. Prerequisite: minimum 90 credit hours including SA 150 and one second year sociology (S) or sociology/anthropology (SA) course, or consent of instructor. Recommended: SA 203 and 300.

SA 401-4 The Politics of Culture in Contemporary Societies (A)
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 395.

SA 402-4 The Practice of Anthropology (A)
An examination of the ways in which anthropologists and ethnographers use their skills in the policy world. Prerequisite: minimum of 90 credit hours including SA 101 and one of SA 201, 263, 286 or 293, or consent of the instructor. Recommended: at least two upper division courses in anthropology.

SA 403-4 Selected Topics in Latin American Economy and Society (LAS)
This seminar will be taught co-operatively by LAS associated faculty or by a visiting professor. A topic will be chosen which can be examined profitably from a multidisciplinary perspective. Prerequisite: minimum of 90 credit hours including LAS 403 and students cannot take both courses for credit.

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, cultural and human experience 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 416-4 Sociology of Art Forms (S)
This course may focus variously 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 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 public health 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.

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 age to socioeconomic, familial and other social institutions; the psychological significance of aging. Prerequisite: minimum of 90 credit hours including SA 150 and one second year sociology (SA) 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 and ingestion of diverse substances. Topics include historical perspectives on production, distribution and consumption; power and meaning; inequality and governance of legal and illegal drugs, food drugs, medicines and diverse populations of consumers and ingesters. Prerequisite: Minimum of 90 credit hours including SA 150 or 151, and SA 301, or graduate student status in Arts and Social Sciences or Faculty of Health Sciences. Students who have taken SA 460 in 04-1 and OS-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, this 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 centrism 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 441-0 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. Prerequisite: successful completion of SA 341 and normally the completion of at least 77 semester credits, 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 Selected Issues in Social Policy Analysis (SA)
An advanced seminar devoted to an in-depth examination of an issue or topic in the field of social policy analysis which is not regularly offered by the department. Prerequisite: minimum of 90 credit hours including SA 150 and one second year sociology (S) or sociology/anthropology (SA) course (or permission of the instructor). Recommended: SA 340.

SA 450-4 Advanced Sociological Theory (S)
A senior seminar on current perspectives in sociological theory. Emphasis will differ from semester to semester. Prerequisite: SA 350, 90 credit hours, a GPA of at least 3.25 and consent of the instructor.

SA 451-4 Issues in Anthropological Theory (A)
A senior seminar on current perspectives in anthropological theory. Emphasis will differ from semester to semester. Prerequisite: SA 301, 90 credit hours, a GPA of at least 3.25 and consent of the instructor.

SA 455-4 Special Topics in Applied Social Research (S)
An advanced seminar devoted to special topics in applied social research. Prerequisite: minimum of 90 credit hours including SA 255 and SA 355 or 356, or consent of instructor.

SA 460-4 Special Topics in Sociology and Anthropology I (SA)
An advanced seminar devoted to an in-depth examination of a topic not regularly offered by the department. The disciplinary designation will change to reflect specific topics: refer to each semester’s course outline. Prerequisite: minimum of 90 credit hours or consent of instructor. Recommended: at least two upper division courses in sociology and/or anthropology.

SA 463-4 Special Topics in Development Studies (SA)
An examination of processes of social change in selected Third World societies. Topics will change from semester to semester, but may include: liberation movements and colonialism, the comparative study of post-revolutionary societies; the persistence, transformation and disappearance of contemporary peasantry; directed change programs. Prerequisite: minimum of 90 credit hours including SA 250 or 101 and one of SA 201, 263, 286 or 293, or consent of instructor. Recommended: SA 363.

SA 472-4 Anthropology and the Past (A)
Anthropologists frequently turn to historical documents (traveller'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 483-4 Political Economy of Latin American Development (LAS)
This is a survey course which introduces students to the various theoretical approaches which have been used since the 1950's 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 production 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: minimum of 90 credit hours including LAS 200 or permission of the instructor. This course is identical to SA 328 and 428, LAS 318, 428 and 483, POL 383 and 483, and students cannot take more than one of these courses for credit.

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 and social development; political and legal relations; gender and generational relations; health and healing; ethnographic 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 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 101 and one of sociology (S) or sociology/anthropology (SA) course, or consent of instructor. Students with credit for SA 496 may not take SA 497 for further credit.

SA 498-4 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 800-2 Graduate Seminar (S)
SA 841-0 Graduate Seminar
SA 850-5 Advanced Sociological Theory
SA 853-5 Readings in Sociology I
SA 854-5 Readings in Sociology II
SA 857-5 Research Design Seminar
SA 870-5 Advanced Anthropological Theory
SA 871-5 Readings in Anthropology I
SA 872-5 Readings in Anthropology II
SA 886-4 Select Problems in Social Analysis
SA 890-0 Practicum I
Prerequisite: 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 department's 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 Extended Essays
SA 897-6 MA Research Project
SA 898-6 MA Thesis
SA 899-6 PhD Thesis

Spanish SPAN
Faculty of Arts and Social Sciences
Department of Linguistics

Language Training Institute

SPAN 102-3 Introductory Spanish I
Acquisition of spoken fluency and elementary reading facility. This course is for all students who have not previously taken Spanish and for those whose proficiency in Spanish is not judged adequate for more advanced courses.

SPAN 103-3 Introductory Spanish II
Continuation of the work of SPAN 102; it should be taken, wherever possible, in the semester immediately following SPAN 102. Prerequisite: SPAN 102 or equivalent.

SPAN 201-3 Intermediate Spanish I
Emphasis on oral command, and accurate and idiomatic expression. 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 303-3 Spanish Composition, Translation and Conversation
Conversation and composition on selected topics with emphasis on correct spelling, sentence and paragraph structures. Prerequisite: SPAN 202 or equivalent.

SPAN 304-3 Advanced Spanish Composition, Transition and Conversation
Continues the work of SPAN 303 with emphasis on style. Reading and analysis of selected texts will serve as the basis for further practice in oral and written expression. Prerequisite: SPAN 303 or equivalent.

SPAN 305-3 Spanish for Business
This course will provide advanced level students and professionals with the specialized and technical vocabulary needed to function in the business world. Cultural aspects involved in dealing with business in Spanish America will also be studied. Prerequisite: SPAN 202.

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.
Statistics STAT
Faculty of Science

STAT 100-3 Chance and Data Analysis
An introductory course in the collection, description, analysis and summary of data, including the concepts of frequency distribution, parameter estimation and hypothesis testing. To receive 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 102, 201, 203 (formerly STAT 103), 301, MATH 101 or 102 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) Mr. R. Insley. Quantitative/Breadth-Science.

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. To receive 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 102, 201, 203 (formerly STAT 103), 301, MATH 101 or 102 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) Mr. R. Insley. Quantitative/Breadth-Science.

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, 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) Mr. R. Insley. Quantitative/Breadth-Science.

STAT 270-3 Introduction to Probability and Statistics
Basic laws of probability, sample distributions. Introduction to statistical applications. Prerequisite: MATH 152 or 155 or 158 must precede or be taken concurrently. Students wishing an intuitive appreciation of a broad range of statistical strategies may wish to take STAT 100 first. 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/Breadth-Science.

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 03-13 semester. Quantitative/Breadth-Science.

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. Quantitative/Breadth-Science.

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/Breadth-Science.

STAT 330-3 Introduction to Mathematical Statistics

STAT 334-0 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. Prerequisite: students must apply and receive permission from the co-op co-ordinator at least one semester 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 337-0 Job Practicum II
This is the second semester of work experience in a co-operative education program available to statistics students. 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. 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 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.
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**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 Modeling**  
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 302 or 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 than one blocking variable, incomplete block designs, fractional factorial designs, and response surface methods. Prerequisite: STAT 350 (or MATH 372). Quantitative.

**STAT 436-0 Job Practicum III**  
This is the third semester of work experience in a co-operative education program available to statistics students. 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 437-0 Job Practicum IV**  
This is the fourth semester of work experience in a co-operative education program available to statistics students. 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 438-0 Job Practicum V**  
This is an optional fifth semester of work experience in a co-operative education program available to statistics students. 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, estimates, 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 considers comparative statistical inference, prior distributions, Bayesian computation, and applications. 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 Modeling**  
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 relating to the student’s field of study. Prerequisite: STAT 302 or 330 or permission of instructor. Open only to graduate students in departments other than Mathematics and Statistics.

**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-series and frequency-domain techniques will be studied. Prerequisite: STAT 450 or equivalent 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 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**  
Applications related to stochastic processes: queues, inventories, counters, etc. Reliability and life testing. Point processes. Simulation.

**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**  
A course to be team 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 Community Economic Development**  
A survey of community economic development. The focus of this course is on understanding the strengths and weaknesses of conventional approaches to economic development; the rationale for alternative approaches to economic development; the varying definitions and interpretations of community economic development; and the components which must be addressed by any coherent economic development strategy. Prerequisite: SCD certificate program approval, 30 credit hours or permission of the Centre. Students who have taken CED 400, 402, or 404 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 Economic Development**  
A more sophisticated theoretical foundation for understanding sustainable development at the community level, including an integrated approach to environmental, economic, and social aspects of development. The course includes sections on natural and social capital, and on making community policy (e.g., the role of local government, economic instruments, etc.) which are essential for the subsequent 400 level courses in the program. Prerequisite: SCD certificate program approval and CED 201 or SCD 201 or SCD diploma program approval or completion of 60 credit hours or permission of the Centre for Sustainable Community Development (CSCD). Students who have taken CED 400 or CED 402 or CED 301 for credit may not take this course for further credit.
SCD 401-4 Concepts, Techniques and Principles for Community Economic Development Practice  
Study of concepts and techniques for economic and policy analysis for economic development. Prerequisite: CED 301 or SCD 301 or permission of the Centre for Sustainable Community Development (CSCD). Students with credit for CED 401 may not take SCD 401 for further credit.

SCD 403-4 Models and Cases in Community Economic Development  
An integration of social, economic and ecological issues from previous CED courses with the methods for case studies of communities and their socio-economic development processes. Prerequisite: CED 303, or SCD 303, or permission of Centre for Sustainable Community Development (CSCD). Students with credit for CED 403 may not take SCD 403 for further credit.

SCD 404-4 Project in Community Economic Development  
Provides a situation in which a student applies ideas and models as acquired in the program to a practical problem in community economic development. Prerequisite: CED 301 or SCD 301, 401, and 403. Students with credit for CED 404 may not take SCD 404 for further credit.

SCD 410-4 Special Topics in Community Economic Development  
A specific topic within the field of CED, not covered by regularly scheduled, required courses in the program. Prerequisite: CED 301 or SCD 301 or permission of the Centre for Sustainable Community Development (CSCD). Students with credit for CED 410 may not take SCD 410 for further credit.

SCD 412-4 Directed Studies in Community Economic Development  
This is an individual study course designed to permit students to significantly expand their knowledge base and apply their critical thinking in CED. The student must develop a readings list in consultation with the CSCD’s academic supervisor and obtain approval for it. A critical, annotated bibliography must be regularly submitted throughout the semester, and a final paper will be required. Non post baccalaureate diploma students must apply for special permission to take this course. Enrollment is limited. Prerequisite: CED or SCD 301, CED or SCD 401; the sustainable community development post baccalaureate diploma program approval. Students with credit for CED 412 may not take SCD 412 for further credit.

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 sociological study 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 pursued 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/county-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 re-definitions of the city; urban fiscal constraints and possibilities; urban governance and local democracy; intergovernmental challenges; urban responses to and re-defininations of re-globalization; case studies of agenda setting and other policy cycle stages. The primary seminar focus is on urban Canada but comparative cases will be drawn from the United States, the EU, Asia and other jurisdictions.

URB 655-4 Global Cities  
Students will critically evaluate and apply various approaches and concepts in assessing the phenomenon of the global city. Assessment of current Canadian and comparative cases and settings provides a basis for this examination, as does the various stages of the policy cycle.

URB 660-4 Economy, Land Use, and Transportation in Cities  
This course is an introduction to urban economics and the economic functions and spatial structure of cities. Cities have high population densities and complex economies based on frequent contacts between people and firms. The course concentrates on why and how cities grow and the influence of public policy on the economies of cities. This course includes examination of the relationship between urban transportation and land use and their influence on such phenomena as urban sprawl.

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 tip-to-tip approach to researching urban public policy problems — from imaging 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 this class, 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 pure and applied contexts. Through 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 cases.
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.

WS 102-3 Introduction to Western Feminisms
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.

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 roles 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
Examines the methods of feminist research practices including the definition of feminist research, the quantitative/qualitative controversy, action research, participant 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 301-4 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 302-4 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 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 religious practices 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 creation, 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.

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 actions, family life 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
Examines the nature and conditions of women’s paid and unpaid labour in the economy as well as various theories which explain 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 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 dealt with as occasion and demand warrant. Prerequisite: 60 credit hours.

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, ecosocialism 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. Prerequisites: 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,
WS 316-4 Disciplining Sex: Feminist Science Studies and Sociobiology

Conceptualizations of sex 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 dealt with as occasion and demand warrant. Prerequisite: 60 credit hours.

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 398-4 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).

WS 398W-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 argument. Prerequisite: 30 credit hours. Quantitative.

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 of feminist theories 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 subtitled 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 421-0 Practicum I

First semester of work experience in the Women's Studies Co-operative Education Program. 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 422-0 Practicum II

Second semester of work experience in the Women's Studies Co-operative Education Program. 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 423-0 Practicum III

Third semester of work experience in the Women's Studies Co-operative Education Program. 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 424-0 Practicum IV

Fourth semester of work experience in the Women's Studies Co-operative Education Program. 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. Canada, England and France are of special interest in this course, but students, with the permission of the instructor, may focus their work on North America and/or Europe generally.

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.
Academic Computing Services
1001 Strand Hall, 604.291.3234 Tel, 604.291.4242 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. This is needed to enroll in classes, send and receive e-mail, use the campus labs, access the library, and to use many other electronic resources.

Public web publishing and general file storage space is provided to all students, faculty and staff. ACS provides specialty software for instructional uses, statistical analysis, web and database programming.

A 24 hour help line is available at 604.291.3230 or via help@sfu.ca. In-person student assistance is available in the campus labs in the library and at AQ3148, or telephone 604.291.3930. In-person help for faculty and staff is available from several ACS consultants.

Alumni Association
University Advancement, 2118 Strand Hall, 604.291.4154 Tel, 604.291.4958 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 seeks to strengthen the bond between the University and its graduates.

The association promotes an annual fundraising campaign for the University, offers benefits and services to members, and supports alumni group activities and career development programs.

The Office of University Advancement maintains alumni records, links alumni and University departments, and provides administrative support.

Archives and Records Management
0400 Maggie Benston Student Services Centre, 604.291.3261 Tel, 604.291.4047 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 fulfill 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.

Centre for Students with Disabilities
1250 Maggie Benston Student Services Centre, 604.291.3112 Tel, 604.291.5457 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 is also responsible for providing direct services to students with a disability. These services include: 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 and should contact the centre as soon as possible, preferably three months prior to the start of a semester.

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 on-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 semester.

Contact the centre for more information during office hours, Monday to Friday, 9 am – 4 pm.

Chartwells Dining Services
Administrative Office, Academic Quadrangle 2028, 604.291.4481 Tel, foodservices@sfu.ca, www.compass-canada.com/Simon Fraser University

Chartwells Dining Services provides a variety of convenient food outlets offering well-balanced, nutritional meals, fast food services, catering for groups and convenience store shopping. The Meal Plan allows students, faculty and staff to purchase meals on a prepaid account from any of the following dining locations throughout the year. The Meal Card 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 entrees
Origins — Baja Flats or Mongolian Grill
Menu items — wraps, taco salad, pitas
Fresh Grille — burgers, combos, weekly burger and sandwich specials
Trattoria — pizza, stromboli, calzone, p’zoli, trattini, panzarotti
Double Treat Bakery — freshly baked assorted pastries
Beverages, ice cream — Starbucks, Ritaazza and specialty coffee, tea, cold beverages, Nestlé’s icream
Sandwich Central — ciabattas, paninis, custom made sandwiches; look for the feature of the week with a variety of fillings and breads
Gardeon Emporium — custom made-to-order salads; look for the weekly special feature salad
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, 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, fresh cut fries, hot dogs, chicken burgers, chicken strips, milkshakes, breakfast sandwiches and more. Located on the 2000 level of the Academic Quadrangle.

Impressions Catering
Whatever the occasion, give us a call. We specialize in catering to conferences, office groups, clubs, business meetings, or any special event. Phone the catering manager at 604.291.4510 to make arrangements or drop by AQ 2028 to pick up our catering brochure. You can fax your order to 604.291.5661 or email catering@sfu.ca.

Raven’s Bistro
Located on the 2000 level of the West Mall Complex, you can enjoy Starbucks™ regular and gourmet coffees, hot or on ice, at the Bistro. It also offers daily features from our Fresh Grill, such as entreés, pastas, salads, gourmet sandwiches, freshly made pizza by the slice, and a variety of desserts and Double Treat Bakery items.
events features a mix of professional touring artists
and spring semesters. In addition, more than 100
undergraduate and graduate
Arts teaching programs can be found in the
public radio stations. For more information about
the Internet via our website at www.cjsf.bc.ca
variety of non-commercial music from all genres as
community with programming content rarely available
Simon Fraser University’s campus
radio station and is funded by Simon Fraser University
students. The station provides its listening
programming content rarely available from the
mainstream media. CJSF offers a wide
variety of non-commercial music from all genres as well as special interest spoken word programming.
The station airs public service announcements from campi
indigenous students to community engagement.
CJSF 90.1 FM is Simon Fraser University’s campus
radio station and is funded by Simon Fraser University
students. The station provides its listening
programming content rarely available from the
mainstream media. CJSF offers a wide
variety of non-commercial music from all genres as well as special interest spoken word programming.
The station airs public service announcements from campus
groups about events and issues of interest to the
campus and off campus community.
CJSF is currently operated by over 150 student
and volunteer volunteers. CJSF offers a wide variety of
interesting volunteer opportunities and new
volunteers are always welcome. See our website at
www.cjsf.bc.ca for volunteer orientation times.
Listen to CJSF on 90.1 FM, 93.9 FM on cable, and on the
Internet via our website at www.cjsf.bc.ca
To find out more about campus radio, call us or drop
by our studios.

School for the Contemporary Arts
604.291.3363 Tel, 604.291.5907 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 137 and pages 280). The school 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 semesters. In addition, more than 100
performances and visual art shows are scheduled throughout the year at 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 604.291.3514.

Professional Development Offerings
Praxis Film Development Workshop, 604.291.3100,
offers a resource centre, intensive workshops, public
seminars, and courses on film-related topics.

First Nations Student Centre
1500 Maggie Benston Student Services Centre,
Tel 604.291.5555/5663 Tel, 604.291.5682 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 604.291.4055.
In the First Nations Student Association lounge,
located in TC 3018, 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 Building, 198A-8960 University
High Street, Burnaby, www.sfu.ca/baff-offa
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 designed to 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.

Faculty of Arts and Social Sciences
www.sfu.ca/baff-offa/frocohort
• French Language Cohort Program in Public
Administration and Community Services extended
minor (BA program)

Faculty of Education
www.sfu.ca/baff-offa/educfcr
• Professional Development Program
• master’s and doctorate programs in Education
• graduate diploma
• continuing education

George and Ida Halpern Centre
Halpern Centre, 604.291.4910 Tel, 604.291.3420 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 exhibitions, 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
0300 Maggie Benston Student Services Centre,
604.291.4112 Tel, 604.291.5888 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
We exist to promote mind-body wellness to enable
students to realize full potential and achieve their
academic, personal and career goals. Our services are
responsive, professional and foster self-reliance.
We work as an integrated team and value innovation
and partnerships with students.
Key services include medical services, health
promotion, physiotherapy, personal counselling and
outreach.

Medical Services
0101 Maggie Benston Student Services Centre,
604.291.4615 Tel, 604.291.4612 Fax,
medical emergencies 604.291.4500
300 Simon Fraser University Vancouver,
604.291.5200 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
0300 Maggie Benston Student Services Centre,
604.291.4655 Tel, health_promo@sfu.ca
The health promotion and prevention team works
hard to help students make informed health
decisions, and hopes to build a balanced, accepting,
and healthy campus community. To do this, the team
of health counsellors and peer educators offer
ongoing, free, healthy living workshops, training and
special events, and provide health education
materials to student groups. Come join us to cultivate
a healthy environment for all.

Physiotherapy Clinic
070 Chancellor Gymnasium Centre, 604.291.3284
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,
604.291.4615 Tel
The Health and Counselling Centre recognizes the
unique pressure and stress that students endure. Our
counsellors will help you manage the challenges of
university life, and help you reach academic and
personal goals with free short-term counseling, group
discussions, and workshops. All discussions are
strictly confidential. Same day appointments are available for initial visits and for students in crisis. If you want to talk, we are here to listen.

Learning Skills Services
Learning Skills Services are moving to the Student Learning Commons in the W.A.C. Bennett Library beginning in the fall of 2006. For more information, see “Student Learning Commons” on page 459.

SFU Career Services
0300 Maggie Benston Student Services Centre, 604.291.3106 Tel, career_services@sfu.ca
Make your transition from Simon Fraser University to the workforce with our multidisciplinary team of career advisors, counsellors, and peer educators. These professionals 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 ‘kick start’ your career.

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/hccc.

Student Volunteers and Leadership
604.291.4678 Tel, student_leadership@sfu.ca
Peer educators are registered student volunteers who deliver outreach programs and provide assistance with health issues, academic performance, career development and personal issues. They work under staff supervision to organize special campus events, conduct educational workshops and small group discussions, and provide one-on-one consultation in all Health and Counselling Centre areas.

To become a peer educator, applications are available in MBC 0300 and are accepted in spring semester. Extensive training is provided in late August.

HCC to go
0300 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.

Human Rights Office
3045 Academic Quadrangle, 604.291.4446 Tel, 604.291.5468 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 educate 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
1480 Maggie Benston Student Services Centre, 604.291.3180 Tel, http://students.sfu.ca/interfaith
The University is served by an ecumenical and interfaith chaplaincy comprising eight chaplains representing the Christian faith and other religions. They provide a wide spectrum of social and spiritual services, and they are prepared to help anyone including students, staff and faculty.

For special events, weekly services and meetings, see Simon Fraser News or 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, 604.291.3910 Tel, 604.291.4900 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, 604.291.3910, 604.291.4900
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 with the design, development and evaluation of teaching
• 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 semester TA/MT Days
• Instructional Skills Workshop
• ISW Facilitator Development Workshop
• Certificate in Web-based Instruction
• Annual Summer E-learning Institute
• Diversity Awareness Workshop
• Voice Projection Workshop
• Teaching and Learning with Technology

Writing-Intensive Learning Office (WILF, formerly CWIL)
The mission of WILF 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. WILF develops and provides resources and strategies for instructional support in writing-intensive courses. By collaborating with instructors and university units, WILF 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, 604.291.4828 Tel, 604.291.4616 Fax, Monday to Thursday, 8 am – 10 pm, Friday 8 am – 4:30 pm
2622 West Mall Centre, 604.291.5538 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, 604.291.3910 Tel, 604.291.4900 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, 604.291.4755 Tel, 604.291.3199 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, 604.291.5050 Tel, 604.291.5052 Fax, www.harbour.sfu.ca/belzberg
The Belzberg Library has served as a branch library for Simon Fraser University Vancouver students and faculty since January 1989. It provides reference assistance, borrowing, course reserve items, and materials requested 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, currently consists of over 8,000 books 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.

Library hours: Belzberg Library service is available Monday to Thursday 10 am – 9 pm; Friday, 10 am – 7 pm; and Saturday, 10 am – 5 pm. Service hours may be reduced during semester breaks, summer semester, and public holidays.

W.A.C. Bennett Library
Burnaby Mountain, library hours 604.291.4351, library information 604.291.3869, Fax 604.291.3023, www.lib.sfu.ca

Collections
The library has over 2.6 million books and subscribes to over 50,000 journals, of which over 15,000 are online. The Library of Congress classified books are arranged on three floors: A-HV on the fourth floor; HX-QA on the fifth floor; and QB-Z on the sixth floor. Periodicals are housed on the sixth floor. 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.

Strong collections are available in all disciplines taught at the University. The library website provides collections access for Simon Fraser University researchers on and off campus through the library catalogue, indexes to journals, electronic journals, and other digital resources. Special Collections include the contemporary literature collection which will be of interest to the avant-garde poetry student, the Fine Arts collection in Canada, the Canadian editorial cartoon collection, the Wask-McDonald Aldine collection, and significant manuscript and archival collections. The curriculum collection contains curriculum guides and suggested readings prescribed by the Department of Education for use in BC schools. A growing collection of sound recordings, scores, slides, dvds, videos and films is available in the media collection. 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 113,000 maps.

Services
Library facilities include the Alumni Information Commons on the third floor which has PC and Mac computers, laser printers, color printers, scanners and application software such as Microsoft Word. Also available to students are microform readers, tape listening facilities, and photocopying machines. A laptop lending program is available and laptop carrels are available on the second and sixth floors, with wireless access on the second to the fifth floors. 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 and adaptive technology.

Information
Librarians and alumni information commons technicians assist users at the third floor Alumni Information Commons help desk, Monday to Thursday 9 am – 8 pm, Friday 9 am – 6 pm, and Saturday and Sunday 10 am – 6 pm. Off-campus users can reach a librarian online via the Ask Us live chat reference service Monday to Thursday, 1 – 8 pm, Friday to Sunday 1 – 5 pm, or send a question by email to libask@sfu.ca.

Service hours are reduced during the summer semester, public holidays and semester breaks.

Research skills classes are offered at the start of each semester to provide a hands-on introduction to effective research techniques. Liaison librarians provide customized, course-specific research instruction at the request of faculty.

Loans
The Simon Fraser University student identification card is also a library card, and is required to borrow books. The standard loan period for undergraduates is three weeks for high demand items, and a full semester for lower demand items. Reserve collection materials are assigned short loan periods of two hours to one week, to increase availability in 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, 604.268.7411 Tel, 604.268.7420 Fax, www.lib.sfu.ca/about/surrey/

This library supports teaching, learning and research at Simon Fraser University. A full range of services, including reference, liaison, instruction, circulation, course reserves and document delivery are offered. The library lends digital camcorders and other media equipment for classes or assignments.

The on-site collections support Simon Fraser University Surrey programs and include 10,000 books, 80 journals, DVDs, videos, CDs, CD-ROMs and games. Students can arrange to have items from the Burnaby and Vancouver libraries delivered to the Surrey campus, thereby providing access to an additional 2.4 million titles. The library’s on-line collection (118,000 e-books, 15,000 e-journals, 400,000 art e-images and hundreds of databases) can be accessed on the web at anytime, anywhere.

Microcomputer Store
8961 Cornerstone Mews, 604.291.3098 Tel, 604.291.4783 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 and software, including Adobe, Borland, Corel, FileMaker, Macromedia, Microsoft and Symantec. Apple, Epson, IBM, Lexmark, Panasonic and others. Our staff, who do not sell on commission, can help customers choose the right products for university work without bias. The store stocks software, printer ink cartridges and toner, memory, media, modems, paper, cables and accessories for your convenience. We also have demonstration computers, monitors and printers for you to evaluate. Our service shop can upgrade 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, 604.291.3325 Tel, 604.291.5666 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, 604.291.4563 Tel, 604.291.3899 Fax, ombudsoffice@sfu.ca

The first of its kind in North America, the Ombuds Office is dedicated to promoting fairness for 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, 604.291.3524 Tel, 604.291.4984 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 five distance education courses to 55 students, the program has grown to over 13,500 course enrolments a year in over 145 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 classes 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, videotapes, 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, 604.291.4560, www.peak.sfu.ca
Published weekly each semester, 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, darkroom and website, and is a member of Canadian University Press.

Recreational Services & Athletics
Recreational Services & Athletics provides the campus community with a variety of physical activities from recreation to varsity and everything in-between. The Chancellors Gymnasium complex includes a new fitness centre (Pipe's Gym), weight room (The Bog), six lane 25 metre pool, diving pool, grass field, a softball field, saunas, locker facilities, three gymnasiums and a physiotherapy clinic. A valid recreation membership is required to use all facilities. Students receive a membership as part of their student fees provided they agree to, and complete, a Release of Liability, Waiver of Claims, Assumption of Risks and Indemnity Agreement. Obtain a membership by visiting the Recreation Service Centre on the main floor of the complex Monday to Friday, 8:30 am – 4 pm.

Athletics
Since its 1965 inception, Simon Fraser University's athletics program enriches Canada with a winning tradition second-to-none. The Clan demonstrated its excellence in the 03/04 season by securing a sixth consecutive Sears Director's Cup, awarded to the top program within the National Association of Intercollegiate Athletics (NAIA).
Simon Fraser University, one of the few Canadian universities to compete in the NAIA and Canadian InterUniversity Sport (CIS), offers athletic financial aid and instructor training. Student-athletes are required to adhere to some at an elite level and non-competitive clubs are available for groups with common interests.

Residence and Housing Office
On-campus housing for traditional residences, studios, townhouses, apartments: Residence Administration Building, 604.291.4201 Tel, 604.291.5903 Fax, http://students.sfu.ca/residences/

Facilities and Amenities
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.
- New traditional 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 traditional residences, accommodations are fully furnished and are equipped with refrigerators.
Students share common kitchens in Shell House, and McTaggart-Cowan Hall.

McTaggart-Cowan Hall, Hamilton Hall, the new residences, and Louis Riel House offer rooms suitable for students with disabilities.

Application
New, full time Simon Fraser University undergraduate students applying for single student housing for fall semester only are guaranteed single student housing provided their applications are received no later than February 28 and all applicable University deadlines and eligibility requirements are met. For all others, residence accommodation is not guaranteed.

Aquatics — on-going courses are offered in children's Red Cross lessons, adult learn-to-swim lessons, lap swimming, deep-water running, and advanced leadership courses.
Fitness — multi-level classes cater to various individual needs and include specialty classes such as aqua fit, high-low, and personal training consultations. Instruction is also offered for CPR, first aid and instructor training.
Non-credit instruction — sequential instruction of up to 12 weeks is offered in activities that are suited to various skill or fitness levels including instruction in combatives, dance, racquet sports, scuba, yoga and several outdoor recreational activities.
Intramural sport — offered to all individuals with a valid gym membership, participation varies from involvement in regular league schedules to special events and tournaments.
Student sport clubs — sponsored by Recreational Services & Athletics, competitive clubs compete in local leagues and tournaments (some at an elite level) and non-competitive clubs are available for groups with common interests.

On-campus housing for traditional residences, studios, townhouses, apartments: Residence Administration Building, 604.291.4201 Tel, 604.291.5903 Fax, http://students.sfu.ca/residences/

Applications for Louis Riel House are accepted year-round. Traditional residences, studios and townhouse application dates begin as follows.
fall 2005 – January 31, 2005
spring 2006 – September 19, 2005
summer 2006 – January 2, 2006
fall 2006 – January 31, 2006
Apply as soon as possible within the application period dates.
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 lease or a rental agreement, which is renewable, based on the completion of residence and housing admittance and eligibility policy requirements.

Off Campus Housing
http://www.sfuoffcampushousing.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, 604.291.3656 Tel, 604.291.3401 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
(opening September 2006)
Mezzanine, Simon Fraser University Surrey, 604.268.7537 Tel, www.sfu.ca/bookstore, 10 am – 3 pm Monday to Friday

Vancouver campus store
Harbour Centre Mall, Simon Fraser University Vancouver, 604.291.5048 Tel, 604.291.5219 Fax, hcbbooks@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. Registered 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. TheBurnaby 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 stationery, 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...
Once these permits are issued, they must be renewed each semester to maintain status. For more detailed information, visit the Parking Services website at www.sfu.ca/security/Parking.

SFU Childcare Society

Children’s Centre, west side of campus, 604.291.4569 Tel, 604.291.3058 Fax, www.sfu.ca/childcare-society

SFU Childcare Society has 11 quality childcare programs for children of students, staff and faculty. Our unique world-class facility provides full and part-time care to over 250 children aged three months to 12 years. School aged children are transported off campus to attend two local Burnaby schools. 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, 604.291.3220 Tel, 604.291.3189 Fax, www.university.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, 604.291.4232 Tel, 604.291.5880 Fax, sfu_international@sfu.ca, www.sfu.ca/international

SFU International is responsible for co-ordinating the University’s exchange programs and other international opportunities as well as encouraging a strong and visible international presence.

Simon Fraser University students and recent graduates have access to a myriad of unique experiences and opportunities by becoming involved in any of the University’s many international and domestic activities, including student exchanges and field schools. The University also offers some assistance in accessing employment and volunteer opportunities overseas.

International 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
- arrival pick-up for new students moving into residence
- 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 many other services and resources both on and off campus

All international and exchange students, visiting scholars, faculty, post-doctoral fellows and families are encouraged to visit our centre. Please email intl_advising@sfu.ca or drop by SFU 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 credits in addition to any transfer credit the student may have been previously awarded.

Normal 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 39 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 semesters (minimum 24 credit hours) are 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/business/current-students/student-resources/exchange for a list of these partner institutions.

Information Sessions

Information meetings for North American or international exchanges are as follows (subject to change). Plan to attend one of these meetings.

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<tr>
<th>Location</th>
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<td>2006 (Times are subject to change)</td>
<td>2006 (Times are subject to change)</td>
<td>2006 (Times are subject to change)</td>
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<tr>
<td>Wed., November 1 10:30 - 11:20 HAL 126</td>
<td>Tues., December 5 3:30 - 4:20 HAL 126</td>
<td>For the spring 2007 schedule of sessions, please visit <a href="http://www.sfu.ca/international/abroad">www.sfu.ca/international/abroad</a>.</td>
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</table>

Application packages are available at www.sfu.ca/international. The application deadlines for fall 2007 are January 28, 2007; for spring 2008 the deadline is May 28, 2007.
### Field Schools
Field schools are discipline-specific one-semester study abroad programs for student groups. Accompanied by a Simon Fraser University professor, participants spend one semester abroad earning Simon Fraser University credit. The following field schools are planned for the 06/07 academic year.

- **Belize (spring 2007)** (proposed)
  - Sponsored by the School of Criminology, this field school begins with two weeks at Simon Fraser University followed by eight weeks in Belize, studying the criminal justice system of that country. Application deadline: to be announced.

- **French (summer 2007)**
  - Sponsored by the Department of French, the field school will take place in Tours, in the Loire Valley of France. Students will spend eight weeks studying French culture, language and literature at the Université de Tours (all instruction in French). Application deadline: January 2007.

### Hellenic Studies (summer 2007)
Sponsored by the Hellenic Studies program, this field school spends one week at Simon Fraser University followed by seven weeks of study in Kephallonia, Greece with field trips to surrounding areas. Application deadline: January 2007.

### Humanities in the Czech Republic (summer 2007)
Sponsored by the Department of Humanities, this field school spends seven to eight weeks in Prague studying Czech culture and humanities courses. Application deadline: January 2007.

### India (fall 2007)
Sponsored by the Faculty of Education, this field school begins with three to four weeks at Simon Fraser University followed by eight weeks in Chandigarh, India, studying international and intercultural education with field excursions to surrounding areas. Application deadline: May 2007.

### Italia Design (summer 2007)
Sponsored by the Faculty of Applied Sciences and the School of Interactive Arts and Technology, this field school uses ethnography, form analysis, pattern languages and other diverse design research methodologies to study the Italian social-linguistic situation as manifested in economic, design and innovation terms. Application deadline: January 2007. See www.sfu.ca/international/abroad for confirmed listings, details and 2006/07 field school applications.

### Field School Information Sessions
Attend an information session and visit www.sfu.ca/international for dates, and locations.

### Independent Study Abroad
Simon Fraser University students may study and receive Simon Fraser University credit at institutions in virtually any country. Students arrange this individually, and must also organize travel 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 Permission (LOP) is available from Student Services (see “Courses at Other Institutions/Letters of Permission” on page 33).

### Student International Mobility Fund (SIMF)
This fund supports international professional development opportunities for Simon Fraser University undergraduates, and contributes to the internationalization of the University community. Funding assists with travel, participation and living costs for individual students who are engaged in international seminars, symposia (such as WUSB, United Nations), conferences and internships. The SIMF does not provide funding for international exchange, field school or paid co-operative education placements. For information and application, visit www.sfu.ca/international/abroad/Other_Programsm.

### Undergraduate International Exchanges

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<th>Country</th>
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<td>Argentina</td>
<td>Buenos Aires</td>
<td>Universidad de Belgrano</td>
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<td>Australia</td>
<td>ACT</td>
<td>Australian National University</td>
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<td>Austria</td>
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<td>Vienna University of Economics and Business Administration</td>
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<td>Belgium</td>
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<td>Université Catholique de Louvain</td>
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<td>Federal University of Parana</td>
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<td>Canada</td>
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<td>Université Quebe a Montréal (UQAM)</td>
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<td>China</td>
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<td>University of the South Pacific</td>
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<td>Helsinki School of Economics</td>
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<td>Jyväskylä</td>
<td>University of Jyväskylä</td>
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<td>France</td>
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<td>Institut d'Etudes Politiques</td>
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<td>Paris</td>
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<td>ESCP-EAP/Paris European School of Management</td>
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<td>India</td>
<td>Chennai</td>
<td>Indian Institute of Technology, Madras</td>
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<td>Delhi</td>
<td>Jawaharlal Nehru University</td>
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<td>Iran</td>
<td>Isfahan</td>
<td>University of Isfahan</td>
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<td>Italy</td>
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<td>Politecnico di Milano</td>
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<td>Milan</td>
<td>Universita Commerciale Luigi Bocconi</td>
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<td>Japan</td>
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<td>Ritsumeikan Asia Pacific University</td>
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<td>Kyoto</td>
<td>Ritsumeikan University</td>
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<td>Daejon</td>
<td>Korea Advanced Institute of Science and Technology</td>
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<td>Mexico</td>
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<td>Instituto Tecnológico Autónomo de México (ITAM)</td>
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<td></td>
<td>Monterrey</td>
<td>ITESM (six campuses in Mexico)</td>
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<td></td>
<td>Puebla</td>
<td>Universidad de las Americas</td>
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<tr>
<td>Morocco</td>
<td></td>
<td>International University of Dhar El Maamoura</td>
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<tr>
<td>Netherlands</td>
<td>Amsterdam</td>
<td>Universiteit van Amsterdam</td>
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<td></td>
<td>The Hague</td>
<td>The Hague School of European Studies</td>
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<td></td>
<td>Maastricht</td>
<td>University of Maastricht</td>
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<td>Universiteit Utrecht</td>
<td>Universiteit Utrecht</td>
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<td>New Zealand</td>
<td>Auckland</td>
<td>University of Auckland</td>
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<td>Norway</td>
<td>Oslo</td>
<td>Norwegian School of Management</td>
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<td></td>
<td>Oslo</td>
<td>University of Oslo</td>
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<td>Philippines</td>
<td>Manila</td>
<td>De La Salle University</td>
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<td>Poland</td>
<td>Krakow</td>
<td>Jagiellonian University</td>
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<td>Scotland</td>
<td>Dundee</td>
<td>University of Dundee</td>
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<td></td>
<td>Glasgow</td>
<td>Strathclyde University</td>
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<td>Singapore</td>
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<td>National University of Singapore</td>
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<td>South Africa</td>
<td>Cape Town</td>
<td>University of Cape Town</td>
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<td>Spain</td>
<td>Madrid</td>
<td>Universidad Complutense de Madrid</td>
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<td></td>
<td>Barcelona</td>
<td>Universidad Pompeu Fabra</td>
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<td>Sweden</td>
<td>Gothenberg</td>
<td>Chalmers University of Technology</td>
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<td>Lund</td>
<td>Lund University</td>
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<td>Malmo</td>
<td>Malmo University</td>
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<td>Uppsala</td>
<td>Uppsala University</td>
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<tr>
<td>Switzerland</td>
<td>Basel</td>
<td>Universität Basel</td>
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<tr>
<td>Taiwan</td>
<td>Hsin-Chu</td>
<td>Ming-Hsin University of Science and Technology</td>
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<tr>
<td></td>
<td>Taipei</td>
<td>College of Commerce, National Chengchi University</td>
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<td></td>
<td>Taipei</td>
<td>National Taiwan Normal University</td>
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<td></td>
<td>Taipei</td>
<td>National Taiwan University</td>
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<tr>
<td>Thailand</td>
<td>Bangkok</td>
<td>Thammasat University</td>
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<tr>
<td>Turkey</td>
<td>Istanbul</td>
<td>Koç University</td>
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<tr>
<td>USA</td>
<td>Boston</td>
<td>Northeastern University</td>
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<td></td>
<td>San Diego</td>
<td>San Diego State University</td>
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<tr>
<td></td>
<td>Virginia</td>
<td>University of Richmond</td>
</tr>
<tr>
<td></td>
<td>various cities</td>
<td>National Student Exchange Program (see below)</td>
</tr>
</tbody>
</table>
Fraser University student is a member. By pooling student resources, the society is able to represent the interests of our members to University administrators and the broader community. Simon Fraser students stand in solidarity with nearly 450,000 students across Canada, as local 23 of the Canadian Federation of Students. As members of the federation, the society works collectively with more than 70 student unions across the country to provide displayed at the society’s general office as well as employment services located at MBC 1150.

Student Work Abroad Program

Administered by the Canadian Federation of Students, the Student Work Abroad Program (SWAP) helps students to work and live in other countries for up to two years. SWAP brochures are available at the Travel CUTS office at MBC 2270.

Membership Dues

The Simon Fraser Student Society collects semester fees and levies to fulfil its responsibility to represent and service students. Each society member pays a membership fee which funds projects, services and advocacy of the Simon Fraser Student Society. These fees also pay for office space in the Maggie Benston Student Services Centre. Membership dues are also collected for the Canadian Federation of Students. All fees were first introduced through referendum, and voted on in the past by Simon Fraser University students. Membership dues are broken down as follows (subject to change):

<table>
<thead>
<tr>
<th>Student Activity Fee Breakdown</th>
<th>full time</th>
<th>part time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simon Fraser Student Society membership fee*</td>
<td>$23.35</td>
<td>$12.68</td>
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<tr>
<td>Student Society Building</td>
<td>$15.00</td>
<td>$7.50</td>
</tr>
<tr>
<td>Canadian Federation of Students provincial membership fee*</td>
<td>$3.75</td>
<td>$1.88</td>
</tr>
<tr>
<td>Canadian Federation of Students national membership fee*</td>
<td>$3.75</td>
<td>$1.88</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>CSJF — 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

Simon Fraser University Gallery

3004 Academic Quadrangle, 604.291.4266 Tel, 604.291.3029 Fax, www.sfu.ca/artgallery, gallery@sfu.ca, Tuesday to Friday, 10 am – 5 pm, Saturday noon to 5 pm, free admission, www.sfu.ca/artgallery

The Simon Fraser University Gallery is a key partner in the University’s cultural education program. It hosts exhibitions at two sites: the main exhibition space at the Burnaby campus, and the Teck Gallery at Simon Fraser University Vancouver. The exhibitions are drawn from a wide range of sources — contemporary and historical — and serve the areas of overlap between students, faculty, staff and the general public. Many exhibitions are drawn from the Greater Vancouver region but, as resources allow, shows from other parts of the world will eventually form a significant part of the program. In a typical year, the gallery will host at least one exhibition featuring work by Simon Fraser University students or faculty and staff.

The main gallery is located on the busy south concourse of the Academic Quadrangle, making it very easy to drop in. The exhibitions are free to the public, including members of the Simon Fraser University community, as are the talks, discussions and lectures that form an integral part of the gallery’s educational mission.

The gallery is the custodian of the University’s art collection which numbers over 4,000 pieces. Approximately 1,300 are currently hanging on walls around the University, many of them in public spaces.

Statistical Consulting Service

K10557 Shrum Science Centre, 604.291.4670 Tel, www.stat.sfu.ca/people/consulting, stat_scs@stat.sfu.ca

This service, a component of the Department of Statistics and Actuarial Science, provides advice and assistance in the design of experiments, surveys, and analysis of all manner of data to university and community clients. The service draws on the expertise of statistics of faculty and graduate students. The SCS has a full time director who is a qualified statistical consultant.

Student Development and Programming Centre

2000 Maggie Benston Student Services Centre, 604.291.4476 Tel, 604.291.5773 Fax, www.sfu.ca/studentlife

General Information

The friendly staff at the Student Development and Programming Centre can help you find the information you need at Simon Fraser University. We’ll answer your questions, and if we don’t know the answer, we’ll contact someone who does.

New Student Orientation – Discover SFU

Three times a year our centre organizes orientation programs for undergraduate and graduate students new to Simon Fraser University. Over 2,000 students attend our orientation sessions each year, and you should, too! We work closely with other Burnaby and Simon Fraser University Surrey campus services that offer specialized orientation programs such as Parent & Family, First Nations, international, and residence. For more information about orientation, visit www.sfu.ca/studentlife/orientation/

Leadership Programs

Each September, we accept a cohort of students into the Simon Fraser University LEAD Certificate in Innovative Leadership, a non-credit program for student leaders that includes workshops from leadership experts and an applied project. Our centre also works with other university departments to enhance student leadership programs including the annual Leadership Summit held at the end of August. For more leadership information, visit www.sfu.ca/studentlife/leadership/

Volunteer Programs

Volunteering is an excellent way to meet people, gain experience and explore career options. Find out about volunteering and the range of opportunities both on and off campus by visiting www.sfu.ca/studentlife/volunteer/
Food Bank
The centre operates the Simon Fraser University Food Bank in conjunction with the Simon Fraser Student Society to meet the needs of Simon Fraser University community members. For information about this confidential service, please visit www.sfu.ca/studentlife/foodbank/.

Student Learning Commons
www.learningcommons.sfu.ca
The Student Learning Commons (SLC) provides assistance with academic writing, learning strategies, library research, computer technology, English language skills, thesis formatting, and more. SLC services include in-person and online workshops, short courses, appointments and drop-in assistance. In Burnaby, the Student Learning Commons is located on the main floor of the Bennett Library. The Simon Fraser University Surrey SLC is adjacent to the Library in the Podium. At Simon Fraser University Vancouver, services are provided in a variety of locations throughout the year.
Recreational Services
604.268.7543 Tel, http://cgi.sfu.ca/~recreati/news.html
Recreational programs at Simon Fraser University
Surrey are offered in partnership with the City of
Surrey Parks and Recreation. Access is currently
available only to members of the Simon Fraser
University Surrey community including students who
have been accepted or approved to programs/majors
specifically available at the Surrey campus. Facilities
include community fitness/weight rooms, swim
sessions, and non-registered aquatic and fitness
programs. Students in approved Simon Fraser
University Surrey programs can also participate in
various intramural and fitness classes.

SFU Bookstore
Mezzanine (opening September 2006) 604.268.7537 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
604.268.7403 Fax, stserv@sfu.ca,
www.surrey.sfu.ca/c_students, Monday to Friday,
9 am – 4:30 pm
The Student and Registrar Services Counter provides
• appointment bookings for academic advising
• processing of some financial assistance documents
• tuition fee payments and admission deposits
• verification of enrollment
• official transcripts
• processing of some financial assistance documents
• Simon Fraser University Surrey photo ID/Library
• card and U-pass production
• appointment bookings for academic advising
Please note that tuition payments can only be made
by cheque, debit card and cash. Post-dated cheques
cannot be accepted. Simon Fraser University does
not accept credit card payments for tuition. To view all
current facilities available to Surrey campus students,
please visit www.surrey.sfu.ca/c_students.

Student Development and Programming
Centre
604.268.7403 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.

Student Recruitment
604.268.7400 Tel, 604.268-7403 Fax,
ugrad-surrey@sfu.ca,
www.surrey.sfu.ca/p_students/index.html
Recruitment Services provide prospective students
with information about the people, programs, and
campus of Simon Fraser University Surrey. Recruitment
staff provide detailed guidance on University entrance and admission requirements and
co-ordinate campus tours, information sessions, open
houses, and presentations. Online resources for
prospective students are available at
www.surrey.sfu.ca/p_students.

Student Learning Commons at Surrey
604.268-7614 Tel, 604.268-7420 Fax,
www.lib.sfu.ca/about/surrey/learningcommons/
The Simon Fraser University Student Learning
Commons at Surrey is an academic learning centre.
The Learning Commons assists and supports
students in their academic pursuits and provide
learning support services for the Surrey campus. The
Learning Commons is structured to ensure academic
input and connections, and collaborative linkages with
other student services. The Learning Commons
provides students the following services: writing
supervision, peer tutoring, peer led study groups, math
drop-in office hours, faculty office hours, learning
skills seminars, and more.

Learning and Instruction Development
Centre (formerly eLINC)
604.268.7591 Tel, 604.268.7448 Fax,
www.lidc.sfu.ca/about/surrey/
Simon Fraser University Surrey is one of the homes of
the Learning and Instructional Development Centre
(LIDC). LIDC assists faculty to develop and revise
programs and courses for undergraduate and
graduate programs, and non-academic initiatives at
the Surrey, Vancouver, and Burnaby campuses, and
also for external clients. LIDC at the Surrey campus
has a particular strength in developing and delivering
technology-enhanced teaching and learning.

Research
Research faculty from the Faculties of 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
The campus has five research labs: the Computing
Science Research Lab, Electronic Commerce,
Communication and Communities Usability Lab, the
InfoNet Media Lab, the Interactivity Lab, and the
Shared Virtual Environment Lab.
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.
The Simon Fraser University campus in downtown Vancouver now comprises the headquarters at Simon Fraser University Vancouver, the Morris J. Wosk Centre for Dialogue, the Chief Dan George Centre for Advanced Education, the School for Contemporary Arts studios at 611 Alexander and the Segal Graduate School of Business.

Morris J. Wosk Centre for Dialogue
580 West Hastings Street, Vancouver V6B 5K3, 604.291.5800 Tel, 604.291.5818 Fax, dialogue@sfu.ca, www.sfu.ca/dialogue/

The Wosk Centre for Dialogue is a dedicated 42,000 square foot conference centre 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. Past events have included the Citizens' Assembly for Electoral Reform, and the Jack Blaney Award for Dialogue, recently presented to former President of Ireland, Mary Robinson.

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 V6B 5K3
Graduate Business Programs: 604.268.7996
Events and Facilities: 604.268.7763

The school 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
- 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, Customized Management Education.

Chief Dan George Centre for Advanced Education
639 Hornby Street, Vancouver V6C 2G3, 604.268.7860 Tel, 604.291.5098 Fax

The Chief Dan George Centre for Advanced Education (CDGC) is a post-secondary centre for management and entrepreneurial learning for First Nations and non-native students, a cultural centre and an international centre for indigenous knowledge. In a partnership with Simon Fraser University, the CDGC's first home is in downtown Vancouver in exceptional facilities provided through the support of the City of Vancouver.

Information and Registration Services
604.291.5000 Tel, 604.291.5060 Fax, 10 am – 7 pm Monday to Thursday, 10 am – 5 pm Friday, (reduced hours in effect during semester breaks), www.vancouver.sfu.ca/misc/inforeg.html

Director
R.B. MacLeod BComm (MTAll)

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 Vancouver 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/

Registration
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.
Centre for Research on Adaptive Behaviour in Economics (CRABE)
Director: J. Arifovic BA (Sarajevo), MA, PhD (Chic), 604.291.5603 Tel, 604.291.5944 Fax, arifovic@sfu.ca, www.sfu.ca/crab
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, experimental economics 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: D.E. Jelinski BSc (Brandon), MSc (Calg), PhD (S Fraser), 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: C.H.W. Jones BSc, PhD (Man), 604.291.5714 Tel, 604.291.3765 Fax, bcsio@sfu.ca, www.bcsio.org
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), 604.291.3358 Tel, 604.291.3427 Fax, dwweeks@sfu.ca
This institute fosters interdisciplinary research and scholarship concerning the relationship between mind and brain. Building on the strengths of world-renowned researchers who investigate a variety of neural, cognitive, motor, and behavioural phenomena, the BCNl focuses on a broad range of topics. Our major emphasis is 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

Centre for Research on Adaptive Behaviour in Economics (CRABE)
Director: L.M. Dill BSc, MSc, PhD (Br Col), 604.291.3664 Tel, ldl@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.

W.J. VanDusen BC Business Studies Institute
Director: C.E. Love BEng, MBA (McM), PhD (Lond), 604.291.4183 Tel, 604.291.5833 Fax, love@sfu.ca, www.sfu.ca/business/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.

Canadian Centre for Studies in Policy, Science and Technology (CPROST)
Interim Director: D. Weeks BA (Windsor), MSc (McM), PhD (Auburn), 604.291.3358 Tel, 604.291.3427 Fax, dwweeks@sfu.ca
This 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 concerning urban problems; provide a facility in which 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 techniques are made available to those having a responsibility for policy.
The focus has evolved into an emphasis on urban safety and security as well as vulnerability and risk. With donations from computer manufacturers and software developers, the centre’s laboratory component has focus on computational approaches and the development of innovative approaches in addressing how safety and security, crime and victimization and fear are influenced by the urban fabric.

**Centre d’études Francophones Québec-Pacifique**

Director: G. Poirier BA (Laval), MA, PhD (McG), poirier@uwatertlooc.ca, http://french.uwaterloo.ca/~poirier/cofeoq_files/Centr e.html

The centre is a research and documentation centre. Its mandate includes gathering and disseminating information relating to French literatures, cultures and language 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 Francophones (CETF) of the University of Montreal and the Pacific Region.

**Chemical Ecology Research Group (CERG)**

Director: E. Plettner BSc, PhD (S Fraser), 604.291.3586 Tel, 604.291.3765 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.

**CIBC Centre for Corporate Governance and Risk Management**

Director: D. Shapiro, BA (Calg), MA, PhD (Cornell), 604.291.5155 Tel, 604.291.5122 Fax, dshapiro@sfu.ca, www.sfu.ca/research/CentresOfResearch/Corporate-Governance-and-Risk -Management.php

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, and 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, 604.291.5153, tomm_lawrence@sfu.ca, www.bus.sfu.ca

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 measurement of the performance of such changes, the evolution of organizations undergoing rapid change.

**Centre for Coastal Studies**

Director: P. Gallaugher BSc, BEd (Br Col), PhD (S Fraser), 604.291.4653 Tel, 604.291.3851 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 Sustainable Community Development**

Director: M.L. Roseland, BA, MA (Wesleyan, Conn), PhD (Br Col), 2100 East Academic Annex, 604.291.5849 Tel, 604.291.5473 Fax, cedadmin@sfu.ca, www.sfu.ca/cscd

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 evolved from the Community Economic Development Centre, and offers credentials in CED. Community Economic Development (CED) is the process by which communities can 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 change 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: K. Lertzman BSc (Manit), MSc, PhD (Br Col), 604.291.3099 Tel, 604.291.4968 Fax, rmpasst@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**

Executive Director: K. Macdonald, 604.822.9875 Tel, 604.822.9317 Fax, iccl@law.ubc.ca, www.iccl-law.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. In addition, its board of directors is comprised of four corporate members: the Department of Justice Canada, the Department Public Safety and Emergency Preparedness, Foreign Affairs Canada, and the BC Ministry of the Attorney General as well as the United Nations Office on Drugs and Crime. The centre is formally affiliated with the United Nations and functions as one of the inter-regional UN affiliates of the United Nations Crime Prevention and Criminal Justice Program.

**Institute for Studies in Criminal Justice Policy**

Director: M.A. Jackson BA (Calif), MA, PhD (Tor), 604.291.4040 Tel, 604.291.4140 Fax

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 community 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. Slackman BA (Calif), MA, PhD (S Fraser), 604.291.4041/4127 Tel, 604.291.4140 Fax, crc@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 Solicitor General for 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 the centre at a minimal level. Currently, the centre operates largely as an administrative unit for external funding received by faculty members of the school. Funding for an administrative unit is provided 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 faculty members.

**Centre for Dialogue**

Director: R.S. Anderson BA (Br Col), MA, PhD (Chic), 604.291.5075 Tel, 604.291.5098 Fax, dialogue-info@sfu.ca, www.sfu.ca/dialogue

Established in March 2002, the centre promotes dialogue in and outside the University through applied, theoretical, and collaborative research, education and professional development. It brings together community leaders and organizations, faculty members from Simon Fraser University and beyond, and undergraduates and graduates to explore dialogue as a discipline and its application in solving complex problems. The centre focuses on the relation of dialogue and negotiation, on dialogue around foreign affairs issues such as war, environment, trade and immigration, on responding to needs in local communities for specific kinds of dialogue, first to relieve rising tensions and then to open possibilities of changing relationships. Within British Columbia, dialogues about the relation of aboriginal and non-aboriginal futures are of continuing interest. The centre is guided by the Centre for Dialogue steering committee and chaired by R.S. Anderson, professor in the School of Communication at Simon Fraser University.
CENTRES AND INSTITUTES

Institute for Research on Early Education and Child Health (REACH)
Director: M. Hoskyn BHE, MA (Br Col), PhD (Calif), 604.286.6956 Tel, 604.291.3303 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 early education and child health that will advance humanity by enriching the lives of young children and their families. Current research focuses 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 influences that influence child health, psychosocial development and adult well-being. 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 part of this process is ongoing collaboration among researchers and the creation of partnerships with the families, educators, administrators, child advocacy groups, and policy makers who will potentially benefit from our research.

The Centre for Education, Law and Society
Director: W. Cassidy BA, MED (S Fraser), PhD (Chic), 604.291.4484/268-7840 Tel, 604.291.3203/268.7840 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. It improves the legal literacy of children and young adults through teaching, curriculum development and research, and community initiatives. Law-related education encompasses: an understanding of law and 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 mediating/authors, 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 based on the ethics of care and justice, to the development of case studies on environmental 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 also 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 (Masseyy), MMath, PhD (Wit), 604.291.5617/4279 Tel, 604.291.5614/4947 Fax, mmmonagan@cecm.sfu.ca, www.cecm.sfu.ca

The centre furthers research and graduate education in computation 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 accessible software archives; provision of tutorial assistance 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-sponsors of speakers, conference 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, and 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. Chun BA (Br Col), MA, PhD (Tor), 604.291.4781 Tel, W. Chan BA (Car), MA (Sheff), PhD (Camb), 604.291.4469 Tel, fisl@sfu.ca, www.sfu.ca/~fisl

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 the feminist movement, nationally and internationally, and to bridge gaps between legal and social science research.

4D LABS
Executive Director: R. Hill, BSc, PhD (WOnt), FCIC, 604.291.4871 Tel, 604.6291.3765 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 platforms. Each team member is internationally recognized and has a proven track record. Team specializations include functional molecules, functional solid state materials, surface chemistry and modification, electrochemistry, fabrication methods, lithography, polymers, biomaterials, materials characterization, theoretical chemistry and physics.

Centre for Natural Hazards Research
Director: J.J. Clague, BA (Occidental), MSc (Calif), PhD (Br Col), PGeo, Canada Research Chair in Natural Hazards, 604.291.4924 Tel, 604.291.4198 Fax, jclague@sfu.ca, www.sfu.ca/cnh

The Centre for Natural Hazards Research (CNHR) is an interdisciplinary and multi-departmental research facility housed 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 wide range of disciplines required for careers in government, academic institutions, and the private sector.

Institute for Critical Studies in Gender and Health (ICSGH)
Director: O. Hankivsky BA (Tor), MA, PhD (WOnt), 604.291.4677 Tel, 604.291.4786 Fax, olena@sfu.ca

The Institute for Critical Studies in Gender and Health (ICSGH) at Simon Fraser University anchors a vibrant interdisciplinary community of over 30 scholars, researchers and students. The Institute’s objectives and research supports Simon Fraser University’s Strategic Research Plan in the areas of health, genomics and physiological sciences, and history, culture, social relations and behavior.

The ICSGH complements the Faculty of Health Sciences and the Institute for Health Research and Education, which seeks to integrate social and natural science research with public health, 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 research area 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 practitioners from many disciplines and research areas to consider conceptual and practical issues related to the Institute’s research mandate. Conferences will provide discussion and debate, the development of intellectual networks and collaborative partnerships, and the chance to produce new and original research.

Gerontology Research Centre
Director: G.M. Gutman BA (Br Col), MA (Alta), PhD (Br Col), 604.291.5062 Tel, 604.291.5066 Fax, gero@sfu.ca, www.sfu.ca/cgrc

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 demographic and lifestyles. The associated 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), 604.291.4375 Tel, 604.291.4786 Fax, cgepe@sfu.ca, www.sfu.ca/cgepe
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), 604.291.4994 Tel, 604.291.4786 Fax, igs@sfu.ca; psmith@sfu.ca, www.sfu.ca/igs
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 and international and origonal 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 issues.

Institute for the Humanities
Director: A.M. Feenberg-Dibon Licence d'Anglais, Diplome d'Etudes Superieures (Sorbonne), PhD (Calif) 604.291.5827 Tel, 604.291.5788 Fax, afschu@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 (Nfld), 604.291.5827 Tel, 604.291.5837 Fax, tessaw@sfu.ca, www.sfu.ca/labour
The centre promotes the study and understanding of labour, working people, and their organizations from a comprehensive social, cultural, historical, political and economic perspective. The centre aims to provide 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, and create mutually supportive and beneficial links between the academic and labour communities.

Centre for International Studies
Director: A. Gerolymatos BA (C'dia), MA, PhD (McG), 604.291.5597 Tel, 604.291.5837 Fax, agerolym@sfu.ca
The goals of this research institute will be to shed light on the problems of the region, both in terms of its historical and contemporary context. Among the research themes that will be addressed are questions of regional co-operation, defense and security, historical background, as well as various socio-economic and political issues that have challenged the states in the region. The objective of the institute is to promote an understanding of, and co-operation with, the countries and peoples of southeastern Europe. To that end, the institute will focus on a variety of initiatives including research projects, conferences, publications, community information programs, faculty exchanges and other forms of information sharing.

David See-Chai Lam Centre for International Communication
Director: J.W. Kim (Indianapolis), 604.291.5089 Tel, 604.291.5112 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. It focuses on international, intercultural, and interlingual communication with 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 courses and workshops, 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 Aix-Marseille II, 604.291.3426/3372 Tel, 604.291.3045 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 (particularly logic and function programming, constraint logic programming and logic grammars). It is strongly interdisciplinary comprising several Simon Fraser University unit members (computing science, linguistics, mathematics, engineering science), two University of BC units (linguistics, computing science), units from the University of Victoria, from Université de Province, and from the University of Dallas.

The group furthers state-of-the-art theoretical and practical aspects of developing declarative programming tools, investigates the uses of these tools for concrete applications, and facilitates 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 (Wnt) MSc, PhD (Br Col), 604.291.4376 Tel, Manager: P. Borghardt, 604.288.6989 Tel, 604.288.7064 IRMACS Tel, 604.288.7065 Fax, irmacs@irmacs.sfu.ca, www.irmacs.sfu.ca
IRMACS is an interdisciplinary research facility that provides a flexible and collaborative environment at Simon Fraser University for more than 100 scientists whose primary laboratory tool is the computer. IRMACS is one of the most technologically sophisticated and enabling environments available to researchers in the mathematical and computational sciences. IRMACS provides access to sophisticated, immersive, 3D visualization technologies and advanced, interactive, display and multi-media collaborative tools.

Mental Health, Law and Policy Institute
Director: R.M. Roesch BS (Arizona), PhD (III), 604.291.3370 Tel, 604.291.3427 Fax, mhpli@sfu.ca, www.sfu.ca/mhpli
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. 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.

Institute of Micromachine and Microfabrication Research
Director: M. Parameswaran BE (Madr), MSc, PhD (Alta), 604.291.4971 Tel, 604.291.4951 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.

Pacific Institute for the Mathematical Sciences (PIMS)
Director: R. Choksi BSc (Tor), MS, PhD (Brown), 604.268.6655 Tel, 604.296.57 Fax, sfu@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 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 serve the mathematical sciences community as a catalyst in communication and dissemination of mathematical ideas through public outreach, mathematical education and training at all levels.
Centre for Policy Research on Science and Technology (CPROST)
Director: B.P. Clayman BSc (Rensselaer), PhD (Cornell), 604.873.3295 Tel, 604.731.2130 Fax, cprost@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, its implementation in the marketplace, and the impact on community and individual interests.

Centre for Public Policy Research
Director: N.D. Oueliler BA (Col), MA (S Fraser), PhD (Br Col), 604.291.5289 Tel, 604.291.5288 Fax, mpp@sfu.ca, www.sfu.ca/mpp

This centre promotes interdisciplinary research, education and dialogue on Canadian public policy issues. It supports and initiates research, publications, colloquia, conferences, visiting researchers and speakers, and international relationships. It is the research arm of the Public Policy Program, 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), 604.291.4305 Tel, E. Elliott, BPE (Ott), MSW (Car), PhD (S Fraser), 604.291.4730 Tel, 604.291.4140 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), 604.291.4819 Tel, 604.291.4947 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), 604.291.5515, 604.291.4504 Fax, duguid@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.

Institute for Studies in Teacher Education
Director: P.P. Grimmett BA (Newcastle, UK), BEd (Keele), MA, MEd (Alta), EdD (Br Col), 604.291.4937, 604.291.3203 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.

Centre for Tourism Policy and Research
Director: P.W. Williams BA (Ott), MA (Wat), PhD (Utah State), 604.291.3103 Tel, 604.291.4968 Fax, p.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. Shorther 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), 604.291.4282 Tel, 604.291.3496 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.
Governing Bodies and Faculty

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
M. Francis, December 2008
B. Macdonald, February 2008
N. McKinnin, January 2008
J. McPhee, July 2008
D. Pekarsky, January 2007
P. Rafferty, January 2009
S. Rasul, February 2008, chair

Elected by Faculty Members Jointly
S. Black, May 31, 2008
T. Brennand, May 31, 2008
J. Deigrande, May 31, 2007
S. Easton, May 31, 2007
M. Ester, May 31, 2008
R. Gencay, May 31, 2009
B. Honda, May 31, 2007
M. Joffres, May 31, 2008
P. Lijjedahl, May 31, 2009
P. Percival, May 31, 2009
J. Peters, May 31, 2009
R. Russell, May 31, 2009
D. Weeks, May 31, 2009

Elected by Convocation
C. Percival, May 31, 2008
D. Smith, May 31, 2008

Elected by Students
S. Hunsdale, May 2007
T. Gregory, May 2007

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
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 Education
Dean of the Faculty of Health Sciences
Dean of the Faculty of Business Administration
Dean of the Faculty of Arts and Social Sciences
Dean of Continuing Studies
Dean of Applied Sciences
Associate Vice-President, Academic
Associate Vice-President, Financial Planning
Associate Vice-President, Research
Associate Vice-President, Students and International (acting)
N. Angerlli BSc, PhD (S Fraser)
Chief Information Officer
J. Cranrin St BSc, MBA (Qu)
Dean of Applied Sciences
B.S. Lewis BA (Hamilton), MA, PhD (Iowa)
Dean of Arts and Social Sciences
J.T. Pierce BA (Tor), MA (Wat), PhD (Lond)
Dean of Business Administration
C.E. Love BEng, MBA (McM), PhD (Lond)
Dean of Continuing Studies
J.G. LaBrie BS (Maine), MSA (St Michael's, Vi), EdD (Penn)
Dean of Education
P. Shaker BA, MA, PhD (Ohio State)
Dean of Graduate Studies
J.C. Driver MA (Camb), PhD (Cal)
Dean of Health Sciences
D.R. MacLean MD (Dal), MHS (Tor)
Dean of Library Services and University Librarian
L. Copeland BSc (Tor), MA (Brandies), MLS (Col)
Dean of Science
M. Plischke BSc (Montr), MPhil (Yale), PhD (Yeshiva)
Registrar and Senior Managing Director, Enrolment Services
W.R. Heath BSA (Guelph)
Senior Managing Director, Learning and Retention
N. Davidge-Johnston BSc (Wat), MSc (S Fraser)
Senior Managing Director, Recreational Services and Athletics
W. Wedmann BA (S Fraser), MA (Oxf)
Senior Managing Director, Student and Community Life
T. Railly BA (C'dia), MA, PhD (McG)
Executive Director of Human Resources
B.L. Anderson BComm (Alta), MA (Illinois)
Executive Director, SFU International (acting)
R. Martin BA, MA, PhD (S Fraser)
Executive Director, Simon Fraser University Surrey
J. Curry BComm (Manit), MBA (S Fraser)
Director of Academic Computing Services
L. Tolan
Director, Academic Planning and Budget
G. Nichols BComm, Dip Mkt Res & Adv, MBL, DBL (S Al)
Director, Academic Relations
S. Roppel BA, MA (Alta)
Director, Administration (Student Services) (acting)
P. Johnsen
Director of Alumni Relations
J. Horne BGS, MALS (S Fraser)
Director of Analytical Studies (to be announced)
Director, Campus Security
N. Coutu
Director of Ceremonies and Events
H. Edgelow
Director of Childcare Services
P. Frouws
Director, Communication Services (Student Services)
B. Henry BA, MBA (Br Col)

Academic and Administrative Officials

Chancellor
B.C. Louie BComm (Br Col), LLD (S Fraser), FCA
President and Vice-Chancellor
M. Stevenson BA (Witw.), MA (Mich), PhD
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 Science
Dean of Graduate Studies
Registrar – Secretary of Senate
University Librarian

Elected by the Faculties

Faculty of Applied Sciences
T. Sherrmer, May 31, 2009
P. Williams, May 31, 2008

Faculty of Arts and Social Sciences
P. Dickinson, May 31, 2008
B. Schellenberg, May 31, 2007

Faculty of Business Administration
M. Fizzell, May 31, 2009
J. Francis, May 31, 2008

Faculty of Education
A. Horvath, May 31, 2008
D. Zandvliet, May 31, 2007

Faculty of Health Sciences
M. Hayes, September 30, 2007

Faculty of Science
F. Breeden, May 31, 2007
N. Haunerland, May 31, 2008

Elected by Faculty Members Jointly
S. Black, May 31, 2008
T. Brennand, May 31, 2008
J. Deigrande, May 31, 2007
S. Easton, May 31, 2007
M. Ester, May 31, 2008
R. Gencay, May 31, 2009
B. Honda, May 31, 2007
M. Joffres, May 31, 2008
P. Lijjedahl, May 31, 2009
P. Percival, May 31, 2009
J. Peters, May 31, 2009
R. Russell, May 31, 2009
D. Weeks, May 31, 2009

Elected by Convocation
C. Percival, May 31, 2008
D. Smith, May 31, 2008

Elected by Students
S. Caufield, May 31, 2007
M. Dunnett, May 31, 2007
E. Halperrn, May 31, 2007
D. Harder, May 31, 2007
S. Hunsdale, May 31, 2007
W. Javed, May 31, 2007
V. Kelly, May 31, 2007
M.C. Lennon, May 31, 2007
G. Lewis, May 31, 2007
W. Li, May 31, 2007
A. van Baarsen, May 31, 2007
R. Warawa, May 31, 2007
J. Wong, May 31, 2007

Administrative Officer
A. Watt, Director, University Secretariat
Director of Co-operative Education (acting)
M. Klemetski BBA (Regina)

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, First Nations Student Centre (acting)
M. Guno BA, MA (S Fraser)

Director of Graduate Records, Admission and Registration
V. Ackroyd BA (C'dia), BA (McM), MS (Portland State)

Director of Health and Counselling Centre (acting)
J. Flagel BBA (Wisconsin), MBA (Minn State)

Director, International Development and Faculty Engagement
S. Nanji BGS (S Fraser)

Director, International Teacher Education
I. Andrews BEd, MA (S Fraser), PhD (Brad)

Director of Media and Public Relations
(to be announced)

Director, Project and Support Services, SFU International
C. Dagg BA (Br Col)

Director of Records and Registration (acting)
R.B. MacLeod BComm (M Amen)

Director, Registrar Services, Simon Fraser University
Vancouver (acting)
J. Lau, BA (S Fraser)

Director, Residence and Housing
J. Flaiikowski BFA (Sir G Wms)

Director, SFU International (acting)
J. Phillips BA (Bishop's)

Director, Student Academic Affairs
J. Hinchcliffe BA (Br Col), MLS (S Fraser)

Director, Student Development and Programming Centre
L. Buckley BA (S Fraser), MA (Tor)

Director, Student Finanicals
A. Brandusescu BSc (Bucharest), MBA (S Fraser)

Director, University Curriculum
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 BS (Tor), MA (Brandes), MLS (Col)

Associate University Librarian (Bennett Public Services)
E. Fairey BA, MA (Br Col), MLS (Tor)

Associate University Librarian (Building, Budget and Personnel)
T.M. Mundle BA, MLS (Br Col)

Associate University Librarian (Collections Services)
G. Bird BA (Cornell), MLS (Br Col)

Head, Acquisitions and Serials Division
P. Gallilee BA (Alta), MLS (Br Col)

Head, Cataloguing
P. Swanson BSoc (Wis), MLS (Br Col)

Associate University Librarian (Processing and Systems)
G.W.B. Owen BA (S Fraser), MLS (Br Col)

Head, Belzberg Library
K. Marotz BA (S Fraser), MLS (Br Col)

Head, Document Delivery Services Division
M. Reid BA (Winn), MLS (Dal)

Liaison Librarians
M. Bodnar BA (S Fraser), MLS (Br Col)
M. Babak (BPA (Sask), MLS (W Ont)
G. Colema BA (Tor), MLS (Br Col)
M. Crouch BA (Ohio State), MLS (Kent State)
H. De Forest BA, MLS (Br Col), MA (Qub)
N. Gjertsen BA, MLS (Br Col)
C. Goldsmith BA, MLS (Br Col)
C. Graebner BA (Carl), MLS (W Ont)

P.E. Groves BA (Watt), MLS (Br Col)
K. Minkus BA (Ont), MLS (Br Col)
I. Nisstee BA, MA (Belgrade), MLS (Br Col)
D. Rimmer BSoc (S Fraser), MLS (Alta)
S. Roberts BA (Sask), MLS (W Ont)
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
M. McIntosh BA (Calg), MLS (Alta)
N. Smart BA (McG), MLS (Br Col)

Librarians, Simon Fraser University Surrey Library
G. Colema BA (Tor), MLS (Br Col)
N. Gjertsen BA, MLS (Br Col)

BC Electronic Library Network Manager
A. Cocchia BA (Br Col), MLS (McG)

Project Co-ordinators
H. Morrison BA, MLS (Alta)

Student Learning Commons
Director
E. Fairey, BA (Br Col), MLS (Tor)

Learning Services Co-ordinator
D. McGee BA (S Fraser), MA (Br Col)

Writing Services Co-ordinator
A. Goddick-Jones, BA, MA (Br Col), PhD (Rensselaer)

Excellence in Teaching Awards

1982
P.E. Kennedy, Economics
A. Lebowitz, English
T.J. O'Shea, Education

1983
M.J. Gresser, Chemistry
L.M. Prock, Education

1984
R. Coe, English
I. Gordon, Business Administration
K. Silverman, Centre for the Arts

1985
R.H. Dunham, English
K.N. Slessor, Chemistry

1986
A. Aberbach, History
R. Mathewes, Biological Sciences
R. Menzies, Criminology

1987
F. Fisher, Biological Sciences
T. Kirschen, Languages, Literatures, and Linguistics
R. Koepe, History

1988
A. Harestad, Biological Sciences
N. Robinson, Education
S. Wasserman, Education

1989
N. Dyck, Sociology and Anthropology
D. Krebs, Psychology
R. Pomery, Chemistry

1990
C.I. Dyck, History
T. Grieve, English
R. Peterman, Resource and Environmental Management

1991
C. Baneree, English
R. Schwindt, Economics
M. Wexler, Business Administration

1992
L. Boland, Economics
M. Gates, Sociology and Anthropology
S. Wendell, Women's Studies

1993
G. Gries, Biological Sciences
M. Manley-Casimir, Education
D. Sutton, Chemistry

1994
J. Dahn, Physics
A. MacKinnon, Education
J. Sturrock, English

1995
C. Day, Resource and Environmental Management
M. Moore, Biological Sciences
H. Trottier, Physics

1996
A.L. Liestman, Computing Science
S. Roberts, English
D.A. Ross, Political Science

1997
M. Jackson, Criminology
J. Giltrow, English
J.S. Craig, History

1998
L. Dill, Biology
G. Poole, Psychology
D. Zapfe, Contemporary Arts

1999
J. Busumtwi-Sam, Political Science
S. Holdcroft, Chemistry
B. Truax, Communication

2000
C.R. Day, History
G. Leach, Chemistry
P. Howard, Communication

2001
M. Laba, Communication
W. Cleveland, History
T. McMullan, Biological Sciences

2002
D. Wilson, Biological Sciences
M. Dubiel, Mathematics
A. Heard, Political Science

2003
H. Bai, Education
Z. Punja, Biological Sciences
C. Thong, Biological Sciences

2004
S. Verdun-Jones, Criminology
P. Budra, English
M. Leier, History

2005
A. Duncan, Business Administration
P. St. Pierre, English
J. Hyndman, Geography
Endowed Chairs and Professors
Burnaby Mountain Endowed Professors
K. Akers, Philosophy
D. Allen, Economics
G. Anderson, Criminology
P. Borwein, Mathematics
L. Dill, Biological Science
R. Grauer, Business Administration
M. Howlett, Political Science
J. Martin, Education
Z.K. Punja, Biological Sciences
P. Ruben, Kinesiology
M. Thewalt, Physics

Centre for North American Business Studies (CNABS) Professor of Business and Government Relations
A.L. Feenberg, Communication
J.K. Cavers, Engineering Science
D. Bingham, Statistics and Actuarial Science
D.L. Baillie, Molecular Biology and Biochemistry

Sponsored Chairs and Professors
A. Gerolymatos, History
Jack and Nancy Farley Professor in History
P.E. Dutton, Humanities
J.S. Woodworth Chair
E. Steiner, Humanities
J.S. Woodworth Resident Scholar
R. Menzies, Criminology

Ming and Stella Wong Endowed Chair in International Business
L. Marks, Contemporary Arts

Hellenic Canadian Congress of BC Chair in Hellenic Studies
A. Gerolymatou, History

Chancellors Emeriti
J. Segal LLD (S Fraser), CM, OBC
M.K. Wong BA (Br Col), LLB (S Fraser), CM

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J.P. Blaney BEd, MEd (Calif)
W.G. Saywell BA, MA, PhD (Tor)

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