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MEMORANDUM

ATTENTION	Senate	DATE	April 8, 2022
FROM	Wade Parkhouse, Chair	PAGES	1/2
RE:	Senate Committee on Undergraduate Studies Program Changes		

For information:

Acting under delegated authority at its meeting of April 7, 2022 SCUS approved the following curriculum revision effective Spring 2023.

a. Faculty of Communication, Art and Technology (SCUS 22-30)**1. School of Interactive Arts and Technology****(i) Upper division requirement changes to the:**

- Interactive Arts and Technology Second Degree BA
- Interactive Arts and Technology Second Degree BSc

(ii) Lower division requirement changes to the:

- Interactive Arts and Technology Major BA
- Interactive Arts and Technology Major BSc
- Interactive Arts and Technology Honours BA
- Interactive Arts and Technology Honours BSc
- Interactive Arts and Technology and Business Joint Major BA or BBA
- Interactive Arts and Technology and Business Joint Major BSc
- Communication and Interactive Arts and Technology Joint Major BA
- Communication and Interactive Arts and Technology Joint Major BSc

b. Faculty of Education (SCUS 22-31)**(i) Changes to the description, admission and program requirements for the:**

- Helping Ease Access for Returning Teachers (HEART) Practicum
- Professional Development Program (PDP)
- Professional Linking Program (PLP)
- Professional Qualification Program (PQP)

c. Faculty of Environment (SCUS 22-32)

1. Department of Geography

(i) Upper division requirement changes for the:

- Human Geography Major
- Human Geography Honours

(ii) Upper division requirement changes for the:

- Global Environmental Systems Major
- Global Environmental Systems Honours

d. Faculty of Science (SCUS 22-33)

1. Department of Earth Sciences

(i) Upper division requirement changes to the Environmental Geoscience Stream:

- Earth Sciences Major
- Earth Sciences Honours

(ii) Upper division requirement changes to the Geology Stream:

- Earth Sciences Major
- Earth Sciences Honours

2. Department of Molecular Biology and Biochemistry

(i) Upper and lower division requirement changes to the:

- Molecular Biology and Biochemistry Major
- Molecular Biology and Biochemistry Honours

(ii) Requirement changes to the Certificate in Genomics

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at <https://docushare.sfu.ca/dsweb/View/Collection-12682>.



Name of Program or Name of Faculty School of Interactives Arts and Technology (SIAT) Faculty of Communication Art and Technology (FCAT)
Rationale for change: To correct an inconsistency of language between our Major and Second Degrees. The existing language for the Second Degrees implies that students must obtain 24 upper division Arts/Science credits from within the required 30 upper division IAT credits. This is incorrect as students can obtain their Arts/Science credits from IAT <u>as well</u> <u>as</u> other disciplines, as specified by our calendar language. This is likely overlooked in the past.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes: Interactive Arts and Technology Second Degree Bachelor of Arts Interactive Arts and Technology Second Degree Bachelor of Science

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Interactive Arts and Technology Second Degree BA Upper Division Requirements Students must complete 44 upper division units as part of their degree. Of these, students must complete 30 upper division IAT units, including IAT 309W - Writing Methods for Research (3) and at least two 400-level IAT courses of 3 units each, excluding directed studies. 24 of the 30 44 upper division IAT units must be chosen from the following arts courses to satisfy BA requirements: [...]
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Interactive Arts and Technology Second Degree BSc**Upper Division Requirements**

Students must complete 44 upper division units as part of their degree. Of these, students must complete 30 upper division IAT units, including

IAT 309W - Writing Methods for Research (3)

and at least two 400-level IAT courses of 3 units each, excluding directed studies.

24 of the ~~30-44~~ upper division ~~IAT~~ units must be chosen from the following science courses to satisfy BSc requirements:

[...]

Name of Program or Name of Faculty School of Interactives Arts and Technology (SIAT) Faculty of Communication Art and Technology (FCAT)
Rationale for change: CMPT 166 is no longer regularly offered and CMPT 120 is a suitable replacement. We need to change the calendar language for our Majors to reflect this change in focus for new admits and students. CMPT 166 will need to be kept as an option for students who still remain in the program from when CMPT 120 was unavailable.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes: Interactive Arts and Technology Major, Bachelor of Arts Interactive Arts and Technology Major, Bachelor of Science Interactive Arts and Technology Honours, Bachelor of Arts Interactive Arts and Technology Honours, Bachelor of Science Interactive Arts and Technology and Business Joint Major, Bachelor of Arts or Bachelor of Business Administration Interactive Arts and Technology and Business Joint Major, Bachelor of Science Communication and Interactive Arts and Technology Joint Major, Bachelor of Arts Communication and Interactive Arts and Technology Joint Major, Bachelor of Science

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Interactive Arts and Technology Major BA Interactive Arts and Technology Major BSc Lower Division Requirements CMPT 166 – An Animated Introduction to Programming (3) CMPT 120 - Introduction to Computing Science and Programming I (3) or an equivalent introductory programming course such as CMPT 102, 120, 125, 126, 128, or 130, or 166 [...]
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**Interactive Arts and Technology Honours BA
Interactive Arts and Technology Honours BSc**

Lower Division Requirements

~~CMPT 166 - An Animated Introduction to Programming (3)~~

CMPT 120 - Introduction to Computing Science and Programming I (3)

or an equivalent introductory programming course **such as** (CMPT 102, ~~120~~,
125, 126, 128, ~~or~~ 130, **or 166**)

[...]

**Communication and Interactive Arts and Technology Joint Major BA
Communication and Interactive Arts and Technology Joint Major BSc
Interactive Arts and Technology and Business Joint Major BA or BBA**

Interactive Arts and Technology

~~CMPT 166 - An Animated Introduction to Programming (3)~~

CMPT 120 - Introduction to Computing Science and Programming I (3)

or an equivalent introductory programming course such as CMPT 102, ~~120~~,
125, 126, 128, ~~or~~ 130, **or 166**

[...]

Interactive Arts and Technology and Business Joint Major BSc

Lower Division Interactive Arts and Technology

Students complete all of

~~CMPT 166 - An Animated Introduction to Programming (3)~~

CMPT 120 - Introduction to Computing Science and Programming I (3)

or an equivalent introductory programming course such as CMPT 102, ~~120~~,
125, 126, 128, ~~or~~ 130, **or 166**

[...]



Name of Program or Name of Faculty Helping Ease Access for Returning Teachers (HEART) Practicum, Faculty of Education
Rationale for change: Updating mailing address and administrative office name change.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes:

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Helping Ease Access for Returning Teachers (HEART) Practicum

The HEART Program supports teachers who need to recertify or acts as a refresher program for teachers who have been out of the classroom for a period of time. HEART is a one-term program including a 2-week orientation and preparation time on campus followed by a 10-12 week practicum in a BC public school. The program offers educators an opportunity to reacquaint themselves with the BC school system, to update **their** teaching ~~requirements~~ **experience**, and to acquire certification from the Teacher Certification Branch (TCB).

Admission Requirements

Applicants must be attending Simon Fraser University, or be admissible.

~~Applicants~~ **Candidates** who have not attended Simon Fraser University previously, or who have not attended in any of three terms prior to intended enrollment in EDUC 406, must **apply for admission or readmission**. ~~submit the application for undergraduate admission to Student Services.~~

Students intending to complete Simon Fraser University courses in preparation for application to EDUC 406 can email ~~the~~ Preservice Professional Studies Admissions ~~office~~ at pps_admissions@sfu.ca for more information.

All candidates are required to complete the online HEART application form located at <http://www.sfu.ca/education/teachersed/programs/heart/overview.html>.

~~HEART applications should be received by~~ **All applications must be submitted to the Preservice Professional Studies Admissions office by:** February 15 for fall term; September 15 for spring term.

All applicants pay the HEART application fee online.

An interview is required **as part of the application process.**

Application available
at: <http://www.sfu.ca/education/teachersed/programs/heart/overview.html>.

All HEART applicants are required to submit the following:

- three online reference forms
- a resumé
- a letter of introduction
- all transcripts
- one unit plan ~~including two detailed lesson plans~~ **and three fully developed lesson plans from the unit using the templates found on our website**
- **Copy of your TCB evaluation letter (if applicable)**
- **Copy of your teaching certificate from the TCB (if applicable)**
- **Copy of any other teaching certificate(s) you hold (if applicable)**

If the number of HEART applicants exceeds facilities and staffing capabilities, the admissions committee will select the best qualified candidates.

Program Requirements

Students complete

[EDUC 406 - Supervised Observation and Teaching \(12\) *](#)

This is a supervised orientation/observation and teaching sequence of about **10-12** weeks in a British Columbia 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. The course is normally offered in the fall and spring terms only and space is limited. Grading is on a pass/withdraw basis.

* not offered in Summer Term

~~Residency Requirements and Transfer Credit~~

- ~~• At least half of the program's total units must be earned through Simon Fraser University study.~~
- ~~• At least two thirds of the program's total upper division units must be earned through Simon Fraser University study.~~

Name of Program or Name of Faculty Professional Development Program (PDP), Faculty of Education
Rationale for change: Updating mailing address and administrative office name change.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes:

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Teacher Education (PDP)

Professional Development Program

This sixteen-month teacher education 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 the Professional Development Program (PDP).

The Professional Development program is also available in French, for students aspiring to teach in Core French, French Immersion or Programme Francophone. See [Bureau des affaires francophones et francophiles \(BAFF\) /Office of Francophone & Francophile Affairs \(OFFA\)](#).

Admission Requirements

Applicants must be attending Simon Fraser University or be admissible.

Candidates who have not attended Simon Fraser University previously, or who have not attended in any of the three terms prior to intended enrollment, must apply for admission or readmission.

All candidates are required to complete the online Professional Development Program application form located at <http://www.sfu.ca/education/teachersed/programs/pdp/overview.html>.

All applications must be submitted to the Preservice Professional Studies Admissions office by January 15.

All applicants pay the PDP application fee online at <http://www.sfu.ca/education/teachersed/programs/pdp/overview.html>.

Elementary Applicants

Elementary applicants must, one full term prior to the start of PDP, have completed a minimum of 76 units of courses acceptable for credit at Simon Fraser University (~~should include 16 units of upper division~~) including the following prerequisite courses:

- six units in English (a maximum of three units of English composition may be included)
- one course (three units) in each of Canadian history, Canadian geography, and laboratory science
- MATH 190
- elementary applicants are recommended to 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 four-year degree with a teachable major subject or two teachable minor subjects prior to commencing PDP.

Teachable Majors or Minors

- Anthropology*
- Applied Mathematics
- Archaeology*
- Asia/Pacific Studies*
- Biological Sciences
- Canadian Studies*
- Chemistry
- Classics/Greek & Roman Studies*
- Computing Science (Minor only)
- Criminology*
- Dance (FPA) (Minor only)
- Earth Science
- Economics*
- English
- First Nations Studies*
- French
- Gender Studies*
- Geography*
- Germanic Studies*
- History*
- Humanities (Minor only)*

- International Relations/Studies*
- Law*
- Mathematics
- Music (FPA)
- Physical Education/Kinesiology (Minor only)
- Physics
- Political Science*
- Slavic Studies*
- Social Studies*
- Sociology*
- Spanish & Latin American Studies*
- Theatre (FPA) (Minor only)
- Visual Arts (FPA)
- World Literature

*see Admission Requirements in the Faculty of Education <https://www.sfu.ca/education/teachersed/programs/pdp/admissions-requirements/secondary.html>

Students planning to teach at the secondary level must complete requirements prior to commencing PDP, except BEd candidates who cannot complete their degree until they have successfully completed PDP. These BEd candidates complete one teachable major or two teachable minors prior to commencing PDP. Students from other institutions may apply prior to degree completion.

Secondary applicants must complete six English units (a maximum of three units of English composition may be included) one full term prior to starting PDP.

It is recommended that applicants have credit for at least one EDUC course before applying for admission.

All Applicants

All PDP applicants are required to submit the following:

- three online recommendation forms
- a written essay described further on the PDP website at <http://www.sfu.ca/education/teachersed/programs/pdp/overview.html>
- a resumé

Before program admission, applicants must demonstrate competence in written and oral English (and written and oral French for French immersion and French as a second language programs).

Students may be interviewed 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.

Because of the number of well qualified PDP applicants, it is unlikely that candidates who have been unsuccessful in four previous competitions will be considered favourably in any subsequent competition. Those who have been unsuccessful in gaining entry on at least four occasions are discouraged from further application.

Program Requirements

The program's duration is four terms.

Professional studies and activities are arranged in the following sequence.

In the first term, students complete

[EDUC 400 - Foundations of Education and Schooling \(15\) *](#)

Through a combination of on-campus seminars and guided field experiences, students will investigate the historical, philosophical, social and cultural foundations of education and schooling, and begin to develop professional orientations and identities that recognize the expectations and responsibilities of practicing teachers. Grading is on a pass/withdraw basis.

In the second term, students complete both of

[EDUC 401W - Introduction to Classroom Teaching \(8\) *](#)

[EDUC 402W - Studies of Educational Theory and Practice \(7\) *](#)

These courses are offered as an integrated program, combining theory and practice in both on-campus seminars and in-school practice in the second term of PDP. This is accomplished by alternating blocks of classroom teaching with workshops and instruction on campus.

During EDUC 401, students are assigned to a teacher (school associate) identified by school authorities and supervised by a faculty associate appointed by the University. Students observe, teach and participate in school routines and programs.

During EDUC 402, students participate in the study of teaching and learning, and make meaning of the complex world of educational practice, informed by extensive study of pedagogical literature.

In the third term, students complete

[EDUC 404 - Coursework Semester \(0\) **](#)

Students' complete enrollment in this course in consultation with the undergraduate program advisor, 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 units of upper division study in education.

Students completing degrees from the Faculties of Applied Sciences, Arts and Social Sciences, Business Administration, Communication, Art, and Technology, Environment, Health Sciences or Science may apply credit for EDUC 404 to that degree.

To be recommended for certification, in EDUC 404 students must achieve a minimum 2.0 grade point average in courses taken towards the EDUC 404 requirement (or receive a P in Pass/Fail courses).

See [EDUC courses](#) for prerequisites and grading.

In the fourth term, students complete

[EDUC 405 - Teaching Semester \(15\) *](#)

This course is a term of classroom experience supervised by University appointed faculty associates. The school placement is appropriate to the educational level and subject specialties in which the student expects to obtain certification. Students assume a large measure of responsibility and participate in a wide range of teaching and supervisory activities. School placements are made in school districts throughout the Lower Mainland.

* not offered in Summer Term

** this zero-unit course functions as an umbrella course where the student completes 15 units of course work

French Education

French Immersion, Core French and Programme Francophone for grades 5-12 are normally available. The majority of the program in Immersion and Programme Francophone is offered in French.

General Regulations

Students complete normal Simon Fraser University enrollment procedures before commencing studies in any term of the professional development program.

Successful applicants will be required to undergo a criminal record check. If the check indicates the applicant has a criminal record, that may preclude continuation in PDP.

Students must meet program goals, as outlined in the Preservice Professional Studies Handbook.

Those with valid reasons may be given permission by the director of Professional Programs to interrupt their program participation. A formal request must be submitted in writing to the director, Professional Programs. A program interruption requested by a student may normally last no longer than two years.

Students who indicate their intention to undertake a given PDP term and then do not honour this commitment are considered to have withdrawn from the program. Permission to re-enter is not given automatically.

Readmission

Students who withdraw from EDUC 400 must re-apply through Preservice Professional Studies Admissions.

EDUC 401/402: Students may apply for re-entry into EDUC 401/402 by the September 15 deadline for the following two spring terms. Students must meet the conditions for re-entry outlined in their withdrawal paperwork. An interview may be required. Applications must be submitted within two years of the withdrawal. Re-Entry is competitive; there is no guarantee of admission to a particular term.

EDUC 405: Students may apply for re-entry by September 15 for the spring term or March 15 for the fall term. Students must meet the conditions for re-entry outlined in their withdrawal paperwork. An interview may be required. Applications must be submitted within two years of the withdrawal. Re-Entry is competitive; there is no guarantee of admission to a particular term.

~~After being~~ **A student** withdrawn from EDUC 405 for a second time, ~~students~~ may not re-enter the program unless by appeal.

Students who withdraw from PDP may apply for re-entry within two years of withdrawal. Students who do not re-enter within the specified time must reapply to the program and must meet the admission requirements at the time of reapplication.

Recommendation for Certification

The academic and professional records of all students who have completed the four professional development program terms will be subject to review by the faculty before a recommendation for certification is forwarded to the Teacher Certification Branch (TCB).

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.
- Normally, students can enroll in course challenge for EDUC 405 only while enrolled 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.
- Applications, available from the Professional Programs director, must be submitted by: May 15 for the fall term; September 15 for the spring term.

Residency Requirements and Transfer Credit

- At least half of the program's total units must be earned through Simon Fraser University study.
- At least two thirds of the program's total upper division units must be earned through Simon Fraser University study.



Name of Program or Name of Faculty Professional Linking Program (PLP), Faculty of Education
Rationale for change: Revisions to the admissions requirements. Updating mailing address and administrative office name change.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes:

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Teacher Education (PLP)

Professional Linking Program

This is a ~~four-term~~ **sixteen-month**, part-time **teacher education** program for employed para-professionals, para-educators, adult educators and teachers (Francophone, trades, independent) who are operating on letters of permission issued from the Teacher Certification Branch (TCB) and who are seeking certification as teachers in British Columbia.

Admission Requirements

Applicants must be attending Simon Fraser University or be admissible.

Candidates who have not attended PLP ~~applicants must be admissible to Simon Fraser University previously. Those who have never attended here, or who have not attended in any of the previous three terms prior to their intended enrollment, must apply for university admission or readmission. See [Undergraduate Admission](#).~~

All candidates are required to complete the online Professional Linking Program

~~Applicants complete the PLP online application form located at~~
<http://www.sfu.ca/education/teachersed/programs/plp/overview.html>.

~~Mail supporting documents to: Simon Fraser University, Faculty of Education, Preservice Professional Studies Admissions, EDB 8630 - 8888 University Drive, Burnaby, BC, V5A 1S6.~~

~~All PLP applications must be submitted to the Preservice Professional Studies Admissions office by January 15 for the spring term.~~

All applications must be submitted to the Preservice Professional Studies Admissions office by January 15.

In addition to the standard requirements for admission to the University, PLP requires candidates to have a minimum of two years of work experience in their fields at the time of application.

Elementary Applicants

Non-degreed Elementary applicants must, by the date of application, have completed a minimum of 76 units **towards a Bachelor's degree**, ~~of courses acceptable for credit at Simon Fraser University (should include 16 units of upper division)~~ including the following prerequisite courses:

- six units in English (**including a minimum of three units of English Literature** ~~a maximum of three units of English composition may be included~~)
- one course (three units) in each of Canadian history, Canadian geography, and laboratory science
- MATH 190
- elementary applicants are recommended to have education, fine and performing arts and kinesiology courses

Elementary prerequisite courses must be completed one full term prior to starting PLP.

Secondary Applicants

Applicants who plan to teach at the secondary level must fulfil the requirements of a **four-year degree with a** teachable major subject or two teachable minor subjects prior to commencing PLP.

Teachable Majors or Minors

- Anthropology*
- Applied Mathematics
- Archaeology*
- Asia/Pacific Studies*
- Biological Sciences
- Canadian Studies*
- Chemistry
- Classics/Greek & Roman Studies*

- Computing Science (Minor only)
- Criminology*
- Dance (FPA) (Minor only)
- Earth Science
- Economics*
- English
- First Nations Studies*
- French
- Gender Studies*
- Geography*
- Germanic Studies*
- History*
- Humanities (Minor only)*
- International Relations/Studies*
- Law*
- Mathematics
- Music (FPA)
- Physical Education/Kinesiology (Minor only)
- Physics
- Political Science*
- Slavic Studies*
- Social Studies*
- Sociology*
- Spanish & Latin American Studies*
- Theatre (FPA) (Minor only)
- Visual Arts (FPA)
- World Literature

*see Admission Requirements in the Faculty of Education

<http://www.sfu.ca/education/teachersed/programs/plp/admissions-requirements.html>

Students planning to teach at the secondary level must complete requirements prior to commencing PLP, except BEd candidates who cannot complete their degree until they have successfully completed PLP. These BEd candidates complete one teachable major or two teachable minors prior to commencing PLP. Students from other institutions may apply prior to degree completion, ~~but must have completed the degree one full term prior to commencing PLP.~~

Secondary applicants must complete six English units (**including a minimum of 3 units of English Literature**) ~~a maximum of three units of English composition may be included~~ **one full term** prior to starting PLP.

It is recommended that applicants have credit for at least one EDUC course before applying for admission.

All Applicants

All PLP applicants **must:** ~~are required to have:~~

- **Have a minimum of two years of paraprofessional experience in their current role (in the school setting) and be working a minimum of three days per week, at the time of application;**
- **Be working with children and youth at the age level they are applying to teach (i.e. Elementary or Secondary);**
- **Meet the minimum academic admission requirements for the age level they wish to teach; and**
- **If accepted into the program, must be employed a minimum of three days a week (in a school setting) working with children and youth at the age level they have been accepted to teach.**
- ~~a minimum of two years of work experience in their current role as a paraprofessional, paraeducator, adult educator or letter of permission teacher~~
- ~~three online reference forms~~
- ~~completed the written assignment (described further on the PLP website at <http://www.sfu.ca/education/teachersed/programs/plp/application-instructions1.html>)~~
- ~~a resumé detailing the roles, responsibilities, duration and location of related work experience~~

All PLP applicants are required to submit the following:

- **three online recommendation forms**
- **a written essay described further on the PLP website at**

<https://www.sfu.ca/education/teachersed/programs/plp/application-instructions1.html>

- **a resumé detailing the roles, responsibilities, duration and location of related work experience**
- **all transcripts**

Before program admission, applicants must demonstrate competence in written and oral English (and written and oral French for French immersion and French as a second language programs).

Students may be interviewed before being considered for program admission.

Admission selection is based favourably on students whose applications show employment experience of working collaboratively with school professionals and community stakeholders in their roles and responsibilities to the children in their care. Commitment to community service is also given consideration both in teaching and other helping roles.

Because of the number of well qualified PLP applicants, it is unlikely that candidates who have been unsuccessful in four previous competitions will be considered favourably in any subsequent competition. Those who have been unsuccessful in gaining entry on at least four occasions are discouraged from further application.

Program Requirements

The program's duration is four terms.

Professional studies and activities are arranged in the following sequence.

In the first term, students complete

~~Students complete all of~~

[EDUC 402W - Studies of Educational Theory and Practice \(7\) *](#)

~~[EDUC 403 - Studies in Teaching and Learning \(11\)](#)~~

~~[EDUC 404 - Coursework Semester \(0\)](#)~~

~~[EDUC 405 - Teaching Semester \(15\)](#)~~

~~During EDUC 402 (part-time studies), students participate in the study of teaching and learning, and make meaning of the complex world of educational practice, informed by extensive study of pedagogical literature. PLP students attend part-time during evening and Saturday classes while maintaining full-time work.~~

In EDUC 402, student teachers begin the study of the literature of education and examine educational issues. Campus-based seminars will introduce theory, concepts and methodologies relevant to teacher development. Student teachers may also attend curriculum workshops to become more familiar with a vast array of educational resources. During the first semester, the goal is to make meaning of the vast and complex world of educational practice, and have this meaning informed by the extensive study of the literature and by thoughtful, reflective discourse.

In the second term, students complete

EDUC 404 - Coursework Semester (0) **

All PLP student teachers are required to take a minimum of 15 units of upper-division Education courses in order to complete the Professional Coursework requirements for certification.

Courses can be taken over one or more semesters to accommodate work schedules. With careful course and minor selection, student teachers can also complete a Bachelor of Education (BEd) as second degree without adding any extra time or cost to the program. An Advisor will provide more information on this option during the first semester of the program.

To be recommended for certification, in EDUC 404 students must achieve a minimum 2.0 grade point average in courses taken towards the EDUC 404 requirement (or receive a P in Pass/Fail courses).

In the third term, students complete

EDUC 403 - Studies in Teaching and Learning (11)

During EDUC 403 (part-time studies), students will need to take a 3 week leave in order to complete a short practicum in a school with a supervising teacher. Students also attend seminar classes each week on Saturdays. The course integrates in school experiences with theoretical concepts discussed in seminars which are held during evenings and weekends. Students observe, practice teach and reflect on experiences in their practice teaching placement, and use these to further their understanding and practices as future teachers.

In the fourth term, students complete

EDUC 405 - Teaching Semester (15) *

During EDUC 405 (~~full-time studies; not offered in the summer term~~), **student teachers are assigned to a classroom for 10–12 weeks of student teaching experience. The school associate and faculty associate provide help and guidance, as well as make assessments of students' growth toward the achievement of standards of professional competence.** ~~students gain classroom experience while being supervised by University appointed faculty associates.~~ The school placement is appropriate to the educational level and subject specialties in which the student expects to gain certification. **All PLP student teachers must arrange with their districts for a full-time leave of absence for the entire practicum of EDUC 405.** Students assume a large measure of responsibility and

participate in a wide range of teaching and supervisory activities. **Students will be placed by the placement coordinator in local schools in the Lower Mainland or Fraser Valley. Students must be prepared to travel a distance to attend their school placements.** ~~School placements are generally made in school districts in the Lower Mainland.~~

* not offered in Summer Term

** this zero-unit course functions as an umbrella course where the student completes 15 units of course work

General Regulations

Students complete normal Simon Fraser University enrollment procedures before commencing studies in any term of the professional linking program.

Successful applicants will be required to undergo a criminal record check. If the check indicates the applicant has a criminal record, that may preclude continuation in PLP.

Students must meet program goals, as outlined in the Preservice Professional Studies Handbook.

Those with valid reasons may be given permission by the director of Professional Programs to interrupt their program. A formal request must be submitted in writing to the director, Professional Programs. A program interruption requested by a student may normally last no longer than two years.

Students who indicate their intention to undertake a given PLP term and then do not honour this commitment are considered to have withdrawn from the program. Permission to re-enter is not given automatically.

Readmission

~~EDUC 402:~~ Students who withdraw from EDUC 402 must re-apply through Preservice Professional Studies Admissions.

EDUC 403: Students may apply for re-entry into EDUC 403 by the March 15 deadline for the two fall terms following the withdrawal. Students must meet the conditions for re-entry outlined in their withdrawal paperwork. An interview may be required. Applications must be submitted within two years of the withdrawal. Re-Entry is competitive; there is no guarantee of admission to a particular term.

EDUC 405: Students may apply for re-entry by September 15 for the spring term or March 15 for the fall term. Students must meet the conditions for re-entry outlined in their withdrawal

paperwork. An interview may be required. Applications must be submitted within two years of the withdrawal. Re-Entry is competitive; there is no guarantee of admission to a particular term.

~~After being A student withdrawn from EDUC 405 for a second time, students may not re-enter the program unless by appeal. apply through Preservice Professional Studies Admissions to start the program again.~~

Students who withdraw from PLP may apply for re-entry within two years of withdrawal. Students who do not re-enter within the specified time must reapply to the program and must meet the admission requirements at the time of reapplication.

Recommendation for Certification

The academic and professional records of all students who have completed the four professional linking program terms will be subject to review by the faculty before a recommendation for certification is forwarded to the Teacher Certification Branch (TCB).

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.**
- **Normally, students can enroll in course challenge for EDUC 405 only while enrolled in EDUC 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 402.**
- **Applications, available from the Professional Programs director, must be submitted by: May 15 for the fall term; September 15 for the spring term.**

Residency Requirements and Transfer Credit

- **At least half of the program's total units must be earned through Simon Fraser University study.**



- At least two thirds of the program's total upper division units must be earned through Simon Fraser University study.

Name of Program or Name of Faculty Professional Qualification Program (PQP), Faculty of Education
Rationale for change: Revisions to the units required to complete program. Minor language adjustments. Updating mailing address and administrative office name change.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes:

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Teacher Education (PQP)

Professional Qualification Program

This is a ~~three-term~~ **twelve-month, full-time** (36 units) program **is for qualified teachers who are new to Canada and who require a particular orientation to the philosophies and practices of education in our local schools.** ~~specifically developed for individuals with previous teaching experience and qualifications from outside Canada.~~ Applicants to the PQP are **internationally-trained teachers with a valid evaluation letter from the Teacher Certification Branch (TCB) recommending them** ~~foreign-trained teachers who have been evaluated by the Teacher Certification Branch (TCB) and have been recommended to complete the PQP at SFU.~~

Admission Requirements

Applicants must be attending Simon Fraser University or be admissible.

~~PQP applicants must be admissible to Simon Fraser University. Those who have never attended here, or who have not attended in any of the previous three terms prior to their intended enrollment, must apply for university admission. See [Undergraduate Admission](#).~~

Candidates who have not attended Simon Fraser University previously, or who have not attended in any of the three terms prior to intended enrollment, must apply for admission or readmission.

PQP applicants must also provide the Preservice Professional Studies Admissions office with a TCB letter showing recommendation for enrollment in PQP or a similar program.

All candidates are required to complete the online Professional Qualification Program application form located at <https://www.sfu.ca/education/teachersed/programs/pqp/overview.html>. ~~Mail supporting documents to Simon Fraser University, Faculty of Education, Preservice Professional Studies Admissions, EDB 8630 – 8888 University Drive, Burnaby, BC, V5A 1S6.~~

An interview is required.

All applications must be submitted to the Preservice Professional Studies Admissions office by March 31.

All applicants pay the PQP application fee online at: <https://www.sfu.ca/education/teachersed/programs/pqp/overview.html>.

All PQP applicants are required to submit the following:

- ~~three~~ **2-3** online ~~reference~~ **recommendation** forms
- a written essay described further on the PQP website at: <https://www.sfu.ca/education/teachersed/programs/pqp/application-instructions.html>
- a resumé
- a letter of introduction
- all transcripts
- copies of any valid teaching certificates held
- TCB evaluation letter

Before program admission, applicants must demonstrate competence in written and oral English.

If the number of PQP applicants exceeds facilities and staffing capabilities, the admissions committee will select the best qualified candidates.

Program Requirements

The program's duration is four terms.

Professional studies and activities are arranged in the following sequence.

In the Ffirst Tterm Sstudents complete both of

[EDUC 352W - Building on Reflective Practice \(4\)](#)

[EDUC 483 - Designs for Learning: Curriculum Studies \(8\)](#)

In EDUC 352, various educational issues related to the caring for learners and the creation of learning communities are explored. Students spend time in educational settings exploring the importance of connected educational experiences for learners. In EDUC 483, students develop conceptual and technical skills through workshops, seminars, and directed and independent study. This course 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.

In the Ssecond Tterm, Sstudents complete

[EDUC 401W - Introduction to Classroom Teaching \(8\)](#)

and a minimum of one methodology course related to their grade/subject area, taken during the summer session (May - August). Additional courses as prescribed by the TCB evaluation may be required. ~~one additional upper division EDUC course (at least four units) selected by the student and approved by the director of PDP or designate.~~

EDUC 401 (Introduction to Classroom Teaching) is a half-term of observation and experience in a B.C. school during which students work with a teacher selected by school authorities and appointed by SFU as a school associate. Students observe, teach, and participate in school routines and programs.

In the Tthird Tterm Sstudents complete

[EDUC 406 - Supervised Observation and Teaching \(12\)](#)

EDUC 406 is designed for those who need to meet BC certification requirements. It is a supervised orientation or teaching sequence of approximately 10-12 weeks in a B.C. public school. This practicum is designed as an opportunity to familiarize students and update their teaching skills.

Upon successful completion of the first two terms, students will then have satisfied the TCB familiarization and methodology requirement for the certification of **internationally-**~~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 TCB's practicum requirement for the certification of **internationally-**~~foreign~~-trained teachers.

PQP students who complete all 36 units will also have met the requirements for the [certificate in professional practices](#). In exceptional circumstances, the faculty associate and the PQP coordinator may recommend to the program director that the student complete EDUC 406 after completion of the first 12 units of PQP. In this case, the student does not need to complete the

second term of course work. It is recommended that students complete at least eight units in Designs for Learning courses (EDUC 412W, 414-416, 430, 472-483, 485) to enhance classroom skills.

General Regulations

Students complete normal Simon Fraser University enrollment procedures before commencing studies in any term of the professional qualification program.

Successful applicants will be required to undergo a criminal record check. If the check indicates the applicant has a criminal record, that may preclude continuation in PQP.

Students must meet program goals, as outlined in the Preservice Professional Studies Handbook.

Those with valid reasons may be given permission by the director of Professional Programs to interrupt their program. A formal request must be submitted in writing to the director, Professional Programs. A program interruption requested by a student may normally last no longer than two years.

Students who indicate their intention to undertake a given PQP term and then do not honour this commitment are considered to have withdrawn from the program. Permission to re-enter is not given automatically.

Readmission

Students who withdraw from EDUC 352, EDUC 483, or EDUC 401 must re-apply through Preservice Professional Studies Admissions.

EDUC 406: Students may apply for re-entry by September 15 for the spring term or March 15 for the fall term. Students must meet the conditions for re-entry outlined in their withdrawal paperwork. An interview may be required. Applications must be submitted within two years of the withdrawal. Re-Entry is competitive; there is no guarantee of admission to a particular term.

~~After being~~ **A student** withdrawn from EDUC 406 for a second time, ~~students may~~ **not re-enter the program unless by appeal** ~~apply through Preservice Professional Studies Admissions to start the program again.~~

Students who withdraw from PQP may apply for re-entry within two years of withdrawal. Students who do not re-enter within the specified time must reapply to the program and must meet the admission requirements at the time of reapplication.

Residency Requirements and Transfer Credit

- At least half of the program's total units must be earned through Simon Fraser University study.
- At least two thirds of the program's total upper division units must be earned through Simon Fraser University study.



Name of Program or Name of Faculty Department of Geography - Human Geography (BA)
Rationale for change: Articulating a new course (GEOG 304 - The Geography of Wine) into the program.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes: BA Human Geography Major and Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<u>Society & Space (choose 3)</u> GEOG 304 – Geography of Wine (4) GEOG 312 - Geography of Natural Hazards (4) GEOG 325 - Geographies of Consumption (4) GEOG 327 - Geography of Tourism (4) GEOG 340 - Queer Geographies (4) GEOG 365 - Race, Resistance and Urban Space (4) GEOG 377 - Environmental History (4) GEOG 382 - World on the Move (4) GEOG 386 - Health Geography (4) GEOG 387 - Geography and Gender (4) [...]

Name of Program or Name of Faculty Department of Geography - Global Environmental Systems (BEnv)
Rationale for change: Articulating a new course (GEOG 304 - The Geography of Wine) into the program. As a multi-disciplinary course, it fits in both the Biophysical Systems and Socio-Economic and Political Systems groupings.
Effective term and year: Spring 2023
The following program(s) will be affected by these changes: BEnv Global Environmental Systems Major and Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

<u>Biophysical Systems (choose two)</u> <u>ARCH 388 - Geoarchaeology (4)</u> <u>GEOG 213 - Introduction to Geomorphology (3)</u> <u>GEOG 304 - Geography of Wine (4)</u> <u>GEOG 311 - Hydrology (4)</u> <u>GEOG 312 - Geography of Natural Hazards (4)</u> <u>GEOG 313 - River Geomorphology (4)</u> <u>GEOG 315 - World Ecosystems (4)</u> <u>GEOG 316 - Global Biogeochemical and Water Cycles (4)</u> <u>GEOG 317 - Soil Science (4)</u> <u>GEOG 411 - Advanced Hydrology (4)</u> <u>GEOG 412W - Glacial Processes and Environments (4)</u> <u>GEOG 414 - Climate Change (4)</u> <u>GEOG 417W - Advanced Soil Science (4)</u> <u>REM 370 - Global Resource Issues in Oceanography (4)</u> <u>REM 375 - Ecology and Conservation of Coastal BC (3)</u> <u>Socio-economic and Political Systems (choose one)</u> <u>ARCH 389 - Ethnoecology (3)</u> <u>GEOG 304 - Geography of Wine (4)</u>

GEOG 321 - Geographies of Global Capitalism (4)
GEOG 322W - World Resources (4)
GEOG 325 - Geographies of Consumption (4)
GEOG 327 - Geography of Tourism (4)
GEOG 333 - Climate Crisis: Understanding a World on Fire (4)
GEOG 340 - Queer Geographies (4)
GEOG 362W - Gentrification and Urban Change (4)
GEOG 363 - Urban Planning and Policy (4)
GEOG 365 - Race, Resistance and Urban Space (4)
GEOG 377 - Environmental History (4)
GEOG 381W - Territory, Power, State (4)
GEOG 382 - World on the Move (4)
GEOG 386 - Health Geography (4)
GEOG 387 - Geography and Gender (4)
GEOG 423 - Capitalist Natures (4)
GEOG 432 - Problems in Environmental History (4)
GSWS 314 - Race, Class and Gender (4)
REM 319 - Environmental and Planning Law (3)
REM 321 - Ecological Economics (4)
REM 350 - Energy Management for a Sustainable Climate and Society (4)
REM 356W - Environmental Policy (3)
REM 454 - Water Security (4)



Calendar Entry Change

Name of Program or Name of Faculty: EASC BSc Program (Environmental Geoscience Stream)

Rationale for change: This change increases exposure of EASC majors to upper division elective courses that are more relevant to their geoscience careers.

Effective term and year: Spring, 2023

The following program(s) will be affected by these changes:

Earth Sciences Major (Environmental Geoscience Stream)

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Upper Division Requirements

Students are encouraged to select upper division elective courses in consultation with an academic advisor, as EGBC has specific groupings of elective courses for each stream, respectively.

[...]

Environmental Geoscience Stream

Students who choose this stream will complete a minimum of 45 units, including

all of

EASC 304 - Hydrogeology (3)

EASC 306 - Field Geology II (3)

EASC 308 - Field Geology III (3)

EASC 313 - Introduction to Soil and Rock Engineering (3)

EASC 315W - Geochemistry of Natural Waters (3)

EASC 403 - Quaternary Geology (3)

and at least 1 of

EASC 301 - Igneous Petrology (3)

EASC 302 - Sedimentary Petrology (3)

EASC 309 - Global Tectonics (3)

EASC 310W - Paleontology (3)

and at least 24 units (~~with a maximum of 12 units from GEOG~~) (**with a minimum of 18 units from EASC**) chosen from

EASC 300 - Selected Topics in Earth Sciences (3)
 EASC 301 - Igneous Petrology (3)
 EASC 302 - Sedimentary Petrology (3)
 EASC 305 - Quantitative Methods for the Earth Sciences (3)
 EASC 307 - Applied Geophysics (3)
 EASC 309 - Global Tectonics (3)
 EASC 310W - Paleontology (3)
 EASC 311 - Metamorphic Petrology (3)
 EASC 312 - Stratigraphy (3)
 EASC 314 - Principles of Glaciology (3)
 EASC 317 - Global Geophysics (3)
 EASC 400 - Selected Topics in Earth Sciences (3)
 EASC 401 - Mineral Deposits (3)
 EASC 402 - Sedimentology (3)
 EASC 404 - Structural Geology II (3)
 EASC 405 - Water, Environment, and Climate Change (3)
 EASC 408 - Regional Geology of Western Canada (3)
 EASC 410 - Groundwater Contamination and Transport (3)
 EASC 411 - Terrain Analysis (3)
 EASC 413 – **Engineering Geology and Resource Geotechnics** (3)
 EASC 415 - Groundwater Modelling (3)
 EASC 416 - Field and Lab Techniques in Hydrogeology (3)
 EASC 420 - Petroleum Geology (3)
 EASC 421 - Volcanology (3)
 EASC 491 - Directed Readings (1) *
 EASC 492 - Directed Readings (2) *
 EASC 493 - Directed Readings (3) *
 GEOG 311 - Hydrology (4)
 GEOG 313 - River Geomorphology (4)
~~GEOG 314 - The Climate System (4)~~
~~GEOG 316 - Global Biogeochemical and Water Cycles (4)~~
~~GEOG 317 - Soil Science (4)~~
~~GEOG 352 - Spatial Analysis (4)~~
~~GEOG 353 - Advanced Remote Sensing (4)~~
 GEOG 355 - Geographical Information Science II (4)
~~GEOG 412W - Glacial Processes and Environments (4)~~
REM 334 - Earth's Past Climates (4)
REM 445 - Environmental Risk Assessment (4)
REM 446 - Environmental and Social Impact Assessment (4)
 SCI 301 - Science Communication: An Introduction (3)

provided the courses have not been used in any of the course groupings listed above.

Calendar Entry Change

Name of Program or Name of Faculty: EASC BSc Honours Program (Environmental Geoscience Stream)

Rationale for change: This change increases exposure of EASC majors to upper division EASC courses more relevant to their geoscience careers.

Effective term and year: Spring, 2023

The following program(s) will be affected by these changes:

Earth Sciences Honours (Environmental Geoscience Stream)

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Upper Division Requirements

Students will complete 60 units minimum of 300 and 400 division EASC or related courses that are approved by the department. Students are encouraged to select upper division elective courses in consultation with an academic advisor, as EGBC has specific groupings of elective courses for each stream, respectively.

[...]

Environmental Geoscience Stream

Students who choose this stream will complete a minimum of 48 units, including

all of

EASC 304 - Hydrogeology (3)
EASC 306 - Field Geology II (3)
EASC 308 - Field Geology III (3)
EASC 313 - Introduction to Soil and Rock Engineering (3)
EASC 315W - Geochemistry of Natural Waters (3)
EASC 403 - Quaternary Geology (3)
EASC 499 - Honours Thesis (6)

and at least one of

EASC 301 - Igneous Petrology (3)

EASC 302 - Sedimentary Petrology (3)

EASC 309 - Global Tectonics (3)

EASC 310W - Paleontology (3)

and at least 21 units ~~(with a maximum of 12 units from GEOG)~~ **(with a minimum of 15 units from EASC)** chosen from

EASC 300 - Selected Topics in Earth Sciences (3)

EASC 301 - Igneous Petrology (3)

EASC 302 - Sedimentary Petrology (3)

EASC 305 - Quantitative Methods for the Earth Sciences (3)

EASC 307 - Applied Geophysics (3)

EASC 309 - Global Tectonics (3)

EASC 310W - Paleontology (3)

EASC 311 - Metamorphic Petrology (3)

EASC 312 - Stratigraphy (3)

EASC 314 - Principles of Glaciology (3)

EASC 317 - Global Geophysics (3)

EASC 400 - Selected Topics in Earth Sciences (3)

EASC 401 - Mineral Deposits (3)

EASC 402 - Sedimentology (3)

EASC 404 - Structural Geology II (3)

EASC 405 - Water, Environment, and Climate Change (3)

EASC 408 - Regional Geology of Western Canada (3)

EASC 410 - Groundwater Contamination and Transport (3)

EASC 411 - Terrain Analysis (3)

EASC 413 – **Engineering Geology and Resource Geotechnics** (3)

EASC 415 - Groundwater Modelling (3)

EASC 416 - Field and Lab Techniques in Hydrogeology (3)

EASC 420 - Petroleum Geology (3)

EASC 421 - Volcanology (3)

EASC 491 - Directed Readings (1) *

EASC 492 - Directed Readings (2) *

EASC 493 - Directed Readings (3) *

~~GEOG 311 - Hydrology (4)~~

~~GEOG 313 - River Geomorphology (4)~~

~~GEOG 314 - The Climate System (4)~~

~~GEOG 316 - Global Biogeochemical and Water Cycles (4)~~

~~GEOG 317 - Soil Science (4)~~

~~GEOG 352 - Spatial Analysis (4)~~

~~GEOG 353 - Advanced Remote Sensing (4)~~

~~GEOG 355 - Geographical Information Science II (4)~~

~~GEOG 412W - Glacial Processes and Environments (4)~~

REM 334 - Earth's Past Climates (4)

REM 445 - Environmental Risk Assessment (4)

REM 446 - Environmental and Social Impact Assessment (4)



SCI 301 - Science Communication: An Introduction (3)

provided the courses have not been used in any of the course groupings listed above.

Calendar Entry Change

Name of Program or Name of Faculty: EASC BSc Program (Geology Stream)

Rationale for change: This change increases exposure of EASC majors to more relevant upper division EASC courses.

Effective term and year: Spring, 2023

The following program(s) will be affected by these changes:

Earth Sciences Major (Geology Stream)

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Upper Division Requirements

Students are encouraged to select upper division elective courses in consultation with an academic advisor, as EGBC has specific groupings of elective courses for each stream, respectively.

Geology Stream

Students who choose this stream will complete a minimum of 45 units, including

all of

EASC 301 - Igneous Petrology (3)

EASC 306 - Field Geology II (3)

EASC 308 - Field Geology III (3)

EASC 309 - Global Tectonics (3)

EASC 310W - Paleontology (3)

and at least 1 of

EASC 302 - Sedimentary Petrology (3)

EASC 311 - Metamorphic Petrology (3)

and at least one of

EASC 304 - Hydrogeology (3)

EASC 313 - Introduction to Soil and Rock Engineering (3)

EASC 403 - Quaternary Geology (3)

and at least 24 units (**with a minimum of 21 units from EASC**) chosen from

EASC 300 - Selected Topics in Earth Sciences (3)
 EASC 302 - Sedimentary Petrology (3)
 EASC 304 - Hydrogeology (3)
 EASC 305 - Quantitative Methods for the Earth Sciences (3)
 EASC 307 - Applied Geophysics (3)
 EASC 311 - Metamorphic Petrology (3)
 EASC 312 - Stratigraphy (3)
 EASC 313 - Introduction to Soil and Rock Engineering (3)
 EASC 314 - Principles of Glaciology (3)
 EASC 315W - Geochemistry of Natural Waters (3)
 EASC 317 - Global Geophysics (3)
 EASC 400 - Selected Topics in Earth Sciences (3)
 EASC 401 - Mineral Deposits (3)
 EASC 402 - Sedimentology (3)
 EASC 403 - Quaternary Geology (3)
 EASC 404 - Structural Geology II (3)
 EASC 405 - Water, Environment, and Climate Change (3)
 EASC 408 - Regional Geology of Western Canada (3)
 EASC 410 - Groundwater Contamination and Transport (3)
 EASC 411 - Terrain Analysis (3)
 EASC 413 – **Engineering Geology and Resource Geotechnics** (3)
 EASC 415 - Groundwater Modelling (3)
 EASC 416 - Field and Lab Techniques in Hydrogeology (3)
 EASC 420 - Petroleum Geology (3)
 EASC 421 - Volcanology (3)
 EASC 491 - Directed Readings (1) *
 EASC 492 - Directed Readings (2) *
 EASC 493 - Directed Readings (3) *
GEOG 311 - Hydrology (4)
 GEOG 313 - River Geomorphology (4)
 GEOG 355 - Geographical Information Science II (4)
REM 334 - Earth's Past Climates (4)
REM 445 – Environmental Risk Assessment (4)
REM 446 – Environmental and Social Impact Assessment (4)
 SCI 301 - Science Communication: An Introduction (3)

provided the courses have not been used in any of the course groupings listed above.

Calendar Entry Change

Name of Program or Name of Faculty: EASC BSc Honours Program (Geology Stream)

Rationale for change: This change increases exposure of EASC majors to upper division EASC courses more relevant to their geoscience careers.

Effective term and year: Spring, 2023

The following program(s) will be affected by these changes:

Earth Sciences Honours (Geology Stream)

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Upper Division Requirements

Students will complete 60 units minimum of 300 and 400 division EASC or related courses that are approved by the department. Students are encouraged to select upper division elective courses in consultation with an academic advisor, as EGBC has specific groupings of elective courses for each stream, respectively.

Geology Stream

Students who choose this stream will complete a minimum of 48 units, including

all of

EASC 301 - Igneous Petrology (3)
EASC 306 - Field Geology II (3)
EASC 308 - Field Geology III (3)
EASC 309 - Global Tectonics (3)
EASC 310W - Paleontology (3)
EASC 499 - Honours Thesis (6)

and at least 1 of

EASC 302 - Sedimentary Petrology (3)
EASC 311 - Metamorphic Petrology (3)

and at least one of

EASC 304 - Hydrogeology (3)

EASC 313 - Introduction to Soil and Rock Engineering (3)

EASC 403 - Quaternary Geology (3)

and at least 21 units (**with a minimum of 18 units from EASC**) chosen from

EASC 300 - Selected Topics in Earth Sciences (3)

EASC 302 - Sedimentary Petrology (3)

EASC 304 - Hydrogeology (3)

EASC 305 - Quantitative Methods for the Earth Sciences (3)

EASC 307 - Applied Geophysics (3)

EASC 311 - Metamorphic Petrology (3)

EASC 312 - Stratigraphy (3)

EASC 313 - Introduction to Soil and Rock Engineering (3)

EASC 314 - Principles of Glaciology (3)

EASC 315W - Geochemistry of Natural Waters (3)

EASC 317 - Global Geophysics (3)

EASC 400 - Selected Topics in Earth Sciences (3)

EASC 401 - Mineral Deposits (3)

EASC 402 - Sedimentology (3)

EASC 403 - Quaternary Geology (3)

EASC 404 - Structural Geology II (3)

EASC 405 - Water, Environment, and Climate Change (3)

EASC 408 - Regional Geology of Western Canada (3)

EASC 410 - Groundwater Contamination and Transport (3)

EASC 411 - Terrain Analysis (3)

EASC 413 – **Engineering Geology and Resource Geotechnics** (3)

EASC 415 - Groundwater Modelling (3)

EASC 416 - Field and Lab Techniques in Hydrogeology (3)

EASC 420 - Petroleum Geology (3)

EASC 421 - Volcanology (3)

EASC 491 - Directed Readings (1) *

EASC 492 - Directed Readings (2) *

EASC 493 - Directed Readings (3) *

GEOG 311 - Hydrology (4)

GEOG 313 - River Geomorphology (4)

GEOG 355 - Geographical Information Science II (4)

REM 334 - Earth's Past Climates (4)

REM 445 - Environmental Risk Assessment (4)

REM 446 - Environmental and Social Impact Assessment (4)

SCI 301 - Science Communication: An Introduction (3)

provided the courses have not been used in any of the course groupings listed above.

Calendar Entry Change

Name of Program or Name of Faculty : **Molecular Biology and Biochemistry**

Rationale for change:

MBB students are best served with a computer programming course in Python, the major programming language used in bioinformatics. Only CMPT 120 and MBB 110 teach programming in Python so other CMPT course options have been removed from the program.

MBB 465 was recently approved as a new course and needs to be added to the list of courses students can take to fulfill their requirements

Effective term and year: Spring 2023

The following program(s) will be affected by these changes:

Molecular Biology and Biochemistry Major
Molecular Biology and Biochemistry Honours

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Lower Division Requirements

[...]

and one of

~~CMPT 102 - Introduction to Scientific Computer Programming (3)~~

~~CMPT 110 - Programming in Visual Basic (3)~~

CMPT 120 - Introduction to Computing Science and Programming I (3)

~~CMPT 130 - Introduction to Computer Programming I (3)~~

~~MBB 243 - Data Analysis for Molecular Biology and Biochemistry (3)*~~

MBB 110* - Data Analysis for Molecular Biology and Biochemistry (3)

[...]

* Recommended

Upper Division Requirements

[...]

and a minimum of six courses chosen from the following list, three of which must be 400-level courses. There is no upper limit on the quantity in this list that can be completed.

HSCI 442 - Immunology Laboratory (4)
MBB 323 - Introduction to Physical Biochemistry (3)
MBB 324 - Protein Biochemistry (3)
MBB 326 - Introduction to the Immune System (3)
MBB 328 - Introduction to Microbial Pathogenesis (3)
MBB 342 - Introductory Genomics and Bioinformatics (3)
MBB 402 - Developmental Biology of Cell Signalling (3)
MBB 420 - Selected Topics in Contemporary Biochemistry (3)
MBB 421 - Nucleic Acids (3)
MBB 422 - Biomembranes (3)
MBB 423 - Protein Structure and Function (3)
MBB 424 - Membrane Transport Mechanisms (3)
MBB 427 - Immune Responses in Health and Disease (3)
MBB 429 - RNA-mediated Gene Regulation (3)
MBB 430 - Mechanisms of Secretory Transport (3)
MBB 431 - Cells and the Environment (3)
MBB 432 - Advanced Molecular Biology Techniques (4)
MBB 433 - Epithelial Cell Biology (3)
MBB 436 - Gene Expression (3)
MBB 438 - Human Molecular Genetics (3)
MBB 440 - Selected Topics in Contemporary Molecular Biology (3)
MBB 441 - Bioinformatics (3)
MBB 443 - Protein Biogenesis and Degradation (3)
MBB 446 - The Molecular Biology of Cancer (3)
MBB 460 - Selected Topics in Bioinformatics and Genomics (3)
MBB 461 - Comparative Genomics (3)
MBB 462 - Human Genomics (3)
MBB 463 - Forensic Genomics (3)
MBB 464 - From Genome to System (3)
MBB 465 - Cancer Genomics

Calendar Entry Change

Name of Program or Name of Faculty: **MBB Certificate in Genomics**

Rationale for change: A new course, MBB 465 – Cancer Genomics, was recently approved by the Department and should be included in the Upper Division requirements for the Genomics Certificate
Effective term and year: Spring 2023
The following program(s) will be affected by these changes: Genomics Certificate

Calendar Change: “to” and “from” sections are not required. All deletions should be crossed out as follows: ~~sample~~. All additions should be marked by a **bold**.

Program Requirements [...] and three of BISC 424 - Applied Genomics (3) BISC 471 - Special Topics in Cells, Molecules and Physiology (3) # BISC 472 - Special Topics in Cells, Molecules and Physiology (3) # BISC 473 - Special Topics in Ecology, Evolution and Conservation (3) # MBB 343 - Data Science Laboratory for Molecular Biology and Biochemistry (2) + MBB 420 - Selected Topics in Contemporary Biochemistry (3) # MBB 440 - Selected Topics in Contemporary Molecular Biology (3) # MBB 441 - Bioinformatics (3) MBB 460 - Selected Topics in Bioinformatics and Genomics (3) MBB 461 - Comparative Genomics (3) MBB 462 - Human Genomics (3) MBB 463 - Forensic Genomics (3) MBB 464 - From Genome to System (3) MBB 465 – Cancer Genomics (3) # course must be in an area related to genomics and must be approved by the MBB academic advisor * courses require additional prerequisites + STAT 320-2 (Introduction to Data Science for the Life Sciences) must be taken concurrently with MBB 343; these courses together count as one of the three
