## Additional Regulations (Degrees)

## Regulations (B.Architectural Studies)

In addition to the specific program requirements, students must satisfy the academic regulations of the university, and the faculty regulations for the degree, below. Students should consult the School when planning their program and selecting courses.

## Residency Requirement

## B.A.S. Hons.

- Conservation and Sustainability
- Urbanism

To be eligible to graduate, students in these programs must present a minimum of 5.0 residency credits in their degree program.

## B.A.S. Hons.

- Design

To be eligible to graduate, students in this program must present a minimum of half the total number of credits required in their program as residency credits.

For more information, consult section 5.3 Minimum Number of Carleton Credits (Residency and Advanced Credits), in the Academic Regulations of the University section of this Calendar.

## Retention of Work

Keeping a good portfolio is a most important part of architectural education. A portfolio represents a record of the student's progress and design experience over the years, and is an indispensable requirement for any future job application. A portfolio is started in first year and continues to expand until graduation. The School, therefore, requires that each student produce reductions (normally $81 / 2 \times 11$ inch reproductions, colour or black and white, slides, and/or digital format CD) of his or her work at the end of each term. One copy of the work should be put in the student's portfolio and the other turned in to the instructor for retention in the School's archives. (This facilitates retrospective exhibitions of work, accreditation, publications and any future references for pedagogic purposes.) Original work is the property of the students, but the School retains the right to keep work of merit for up to two years after the date of submission. The School will make every effort to preserve the work in good condition, and will give authorship credit and take care of its proper use.

## Regulations (B.A.)

The regulations presented below apply to all Bachelor of Arts programs. In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

## First-Year Seminars

B.A. degree students are strongly encouraged to include a First-Year Seminar (FYSM) during their first 4.0 credits of registration. Students are limited to 1.0 credit in FYSM and can only register in a FYSM while they have firstyear standing in their B.A. program. Students who have completed the Enriched Support Program (ESP) or who are required to take a minimum of one English as a Second Language (ESLA) credit are not permitted to register in a FYSM.

## Breadth Requirement

Among the credits presented at graduation, students in both the B.A. General and the B.A. Honours degrees and B.Co.M.S. are required to include 3.0 breadth credits, including 1.0 credit from each of three of the four Breadth Areas identified below. Credits that fulfil requirements in the Major, Minor, Concentration or Specialization may be used to fulfil the Breadth Requirement.
Students admitted with a completed university degree are exempt from breadth requirements.

Students in the following interdisciplinary programs are exempt from the B.A. breadth requirement.

- African Studies
- Criminology and Criminal Justice
- Environmental Studies
- Human Rights
- Human Rights and Social Justice


## Breadth Area 1: Culture and Communication

American Sign Language, Art History, Art and Culture, Communication and Media Studies, Comparative Literary Studies, Digital Humanities, English, Film Studies, French, Journalism, Music, and Languages (Arabic, English as a Second Language, German, Greek, Hebrew, Indigenous Languages, Italian, Japanese, Korean, Latin, Mandarin, Portuguese, Russian, Spanish)
Subject codes: ARAB, ARTH, ASLA, CHIN, CLST, COMS, DIGH, ENGL, ESLA, FILM, FINS, FREN, GERM, GREK, HEBR, ITAL, JAPA, JOUR, LANG, LATN, MUSI, PORT, RUSS, SPAN

## Breadth Area 2: Humanities

African Studies, Applied Linguistics and Discourse Studies, Canadian Studies, Child Studies, Classical Civilization, Directed Interdisciplinary Studies, Disability Studies, European and Russian Studies, History, Human Rights, Humanities, Indigenous Studies, Latin American and Caribbean Studies, Linguistics, Medieval and Early Modern Studies, Philosophy, Religion, Sexuality Studies, South Asian Studies, and Women's and Gender Studies.

Subject codes: AFRI, ALDS, CDNS, CHST, CLCV, DBST, DIST, EURR, HIST, HUMR, HUMS, INDG, LACS, LING, MEMS, PHIL, RELI, SAST, SXST, WGST

Breadth Area 3: Science, Engineering, and Design Architecture, Biology, Chemistry, Computer Science, Earth Sciences, Engineering, Environmental Science, Food Science and Nutrition, Health Sciences, Industrial

Design, Mathematics, Neuroscience, Statistics, Physics, and Technology, Society, Environment.

Subject codes: AERO, ARCC, ARCH, ARCN, ARCS, ARCU, BIOC, BIOL, CHEM, CIVE, CMPS, COMP, ECOR, ELEC, ENSC, ENVE, ERTH, FOOD, HLTH, IDES, ISCI, ISCS, ISYS, MAAE, MATH, MECH, NEUR, NSCI, PHYS, SREE, STAT, SYSC, TSES

## Breadth Area 4: Social Sciences

Anthropology, Business, Cognitive Science, Criminology and Criminal Justice, Economics, Environmental Studies, Geography, Geomatics, Global and International Studies, Global Politics, Interdisciplinary Public Affairs, International Affairs, Law, Migration and Diaspora Studies, Political Management, Political Science, Psychology, Public Administration, Public Affairs and Policy Management, Social Work, Sociology/Anthropology, Sociology
Subject codes: ANTH, BUSI, CGSC, CRCJ, ECON, ENST, GEOG, GEOM, GINS, GPOL, INAF, IPAF, LAWS, MGDS, PADM, PAPM, POLM, PSCI, PSYC, SOCI, SOWK

## Declared and Undeclared Students

Students who are registered in a program within the degree are called Declared students. Most students designate a program of study when they first apply for admission and so begin their studies as Declared students. Students may also choose to begin their studies within the B.A. degree without being registered in a program. These students are referred to as Undeclared. The recommended course pattern for Undeclared students is outlined under Undeclared in the Programs section of this Calendar. Undeclared students must apply to enter a program before beginning their second year of study. The Student Academic Success Centre offers support to Undeclared students in making this decision.

## Change of Program Within the B.A. Degree

Students may transfer to a program within the B.A. degree, if upon entry to the new program they would be in Good Standing. Other applications for change of program will be considered on their merits; students may be admitted to the new program in Good Standing or on Academic Warning. Students may apply to declare or change their program within the B.A. Degree at the Registrar's Office according to the published deadlines. Acceptance into a program or into a program element or option is subject to any enrollment limitations, specific program, program element or option requirements, as published in the relevant Calendar entry.

## Minors, Concentrations and Specializations

Students may apply to the Registrar's Office to be admitted to a minor, concentration or specialization during their first or subsequent years of study. Acceptance into a minor, concentration or specialization is subject to any specific requirements of the intended Minor, Concentration or Specialization as published in the relevant Calendar entry. Acceptance into a Concentration or Specialization requires that the student be in Good Standing.

## Mention : Français

Students registered in certain B.A. programs may earn the notation Mention : Français by completing part of
their requirements in French and by demonstrating a knowledge of the history and culture of French Canada. The general requirements are listed below. For more specific details consult the departmental program entries.
Students in a B.A. Honours program must present:

1. 1.0 credit in French language;
2. 1.0 credit devoted to the history and culture of French Canada;
3. 1.0 credit at the 2000 - or 3000 -level and 1.0 credit at the 4000-level in the Honours discipline taken in French.

Students in a B.A. General program must present:

1. 1.0 credit in advanced French;
2. 1.0 credit devoted to the history and culture of French Canada;
3. 1.0 credit at the 2000 - or 3000 -level in the Major discipline taken in French.

Students in Combined Honours programs must fulfil the Mention : Français requirement in both disciplines.
Courses taught in French (Item 3, above) may be taken at Carleton, at the University of Ottawa on the Exchange Agreement, or at a francophone university on a Letter of Permission. Students planning to take courses on exchange or on a Letter of Permission should take careful note of the residence requirement for a minimum number of Carleton courses in their programs. Consult the Academic Regulations of the University section of this Calendar for information regarding study on Exchange or Letter of Permission.

## Regulations (B.Cog.Sc.)

The regulations presented below apply to all Bachelor of Cognitive Science programs. In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

## First-Year Seminars

B.Cog.Sc. degree students are strongly encouraged to include a First-Year Seminar (FYSM) during their first 4.0 credits of registration. Students are limited to 1.0 credit in FYSM (one 1.0 -credit FYSM or two 0.5 -credit FYSM's) and can only register in a FYSM while they have firstyear standing in their B.Cog.Sc. program. Students who have completed the Enriched Support Program (ESP) or who are required to take a minimum of one English as a Second Language (ESLA) credit are not permitted to register in a FYSM.

## Change of Program Within the B.Cog.Sc. Degree

Students may transfer to a program within the B.Cog.Sc. degree, if upon entry to the new program they would be in Good Standing . Other applications for change of program will be considered on their merits;
students may be admitted to the new program in Good Standing or on Academic Warning. Students may apply
to declare or change their program within the B.Cog.Sc. Degree at the Registrar's Office according to the published deadlines. Acceptance into a program or into a program element or option is subject to any enrolment limitations, specific program, program element or option requirements, as published in the relevant Calendar entry.

## Minors, Concentrations and Specializations

Students may apply to the Registrar's Office to be admitted to a minor, concentration or specialization during their first or subsequent years of study. Acceptance into a minor, concentration or specialization is subject to any specific requirements of the intended Minor, Concentration or Specialization as published in the relevant Calendar entry. Acceptance into a Concentration or Specialization requires that the student be in Good Standing.

## Mention : Français

Students registered in the B.Cog.Sc. may earn the notation Mention: Français by completing part of their requirements in French and by demonstrating a knowledge of the history and culture of French Canada. The general requirements are listed below.
Students in the B.Cog.Sc. Honours program must present:

1. 1.0 credit in the French language;
2. 1.0 credit devoted to the history and culture of French Canada;
3. 1.0 credit at the 2000- or 3000 -level and 1.0 credit at the 4000-level taken in French. These credits may come from any of Philosophy, Psychology, Computer Science, Linguistics, Neuroscience, or Cognitive Science, without restriction.
Students in the B.Cog.Sc. General program must present:
4. 1.0 credit in the French language;
5. 1.0 credit devoted to the history and culture of French Canada
6. 1.0 credit at the 2000- or 3000-level taken in French. This credit may come from any of Philosophy, Psychology, Computer Science, Linguistics, Neuroscience, or Cognitive Science, without restriction.
Courses taught in French (Item 3, above) may be taken at Carleton, at the University of Ottawa on the Exchange Agreement, or at a francophone university on a Letter of Permission. Students planning to take courses on exchange or on a Letter of Permission should take careful note of the residence requirement for a minimum number of Carleton courses in their programs. Consult the Academic Regulations of the University section of this Calendar for information regarding study on Exchange or Letter of Permission.

## Regulations (B.Econ.)

The regulations presented in this section apply to all Bachelor of Economics (B.Econ.) programs.
In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of

Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

## First-Year Seminars

B.Econ. degree students are strongly encouraged to include a First-Year Seminar (FYSM) during their first 4.0 credits of registration. Students are limited to 1.0 credit in FYSM and can only register in a FYSM while they have first-year standing in their B.Econ. program. Students who have completed the Enriched Support Program (ESP) or who are required to take a minimum of one English as a Second Language (ESLA) credit are not permitted to register in a FYSM.

## 0000-Level Courses

Students in B.Econ. programs may not count any 0000level Mathematics courses for credit toward their degree. Such students may, however, be required to take one or more of these courses to replace missing program prerequisites in which case the courses will be set aside as "no credit for degree" (NCD).

## Access to Economics Courses

To meet the prerequisite requirements for most 2000-level Economics courses, students must have obtained a grade of C- or higher in ECON 1401 and a grade of C- or higher in FYSM 1003 [1.0] or ECON 1000 [1.0] or, equivalently, an average grade of C- or higher in ECON 1001 and ECON 1002, one or both of which have been transferred from another university.

## Regulations (B.Eng.)

The regulations presented in this section apply to all Bachelor of Engineering programs.

In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (see the Academic Regulations of the University section of this Calendar), with the following additions and amendments:

## Academic Performance Evaluation for Engineering

1. In Engineering programs, all credits are included in the Major CGPA, making it identical to the Overall CGPA.
2. Students who are not assigned the status Good Standing or Academic Warning will be required to leave the degree with either the status Continue in Alternate (CA) or the status Dismissed from Program (DP).

## Graduation

Students in Engineering programs are covered by the common University regulations regarding graduation, with the following additions and amendments.

1. Students entering an Engineering program with Advanced Standing will receive transfer credit for at most ten of the credits required for their program.
2. Students must take a minimum of 1.0 credit of complementary studies at Carleton University.

## Course Load

Regulations regarding Course Load and Overload can be found in the Academic Regulations of the University
section of this Calendar. The normal course load in Engineering is defined as the number of credits required in the student's program for the current year status of the students. Since the programs in Engineering require more than 20.0 credits in total, the normal course load is more than 5.0 credits in some years of the program. Registration in more than this number of credits constitutes an overload.

## Co-operative Education Programs

All Engineering programs are available with or without participation in the Co-operative Education option.

## Year Status for Engineering

In the Bachelor of Engineering Degree program, Year Status is defined as follows.

1st year: Admission to the program.
2nd year: Successful completion of all Engineering, Science and Mathematics course requirements in the first year of the program, all English as a Second Language Requirements, and any additional requirements as determined in the admissions process.
3rd year: Successful completion of 4.0 credits from the second year requirements of the program.

4th year: Successful completion of all second year requirements and 3.5 credits from the third year requirements of the program.

## Year Status Prerequisites

Year Status in Engineering is used in some course prerequisites to limit access to only those students who have sufficient preparation. In particular students will not have access to second, third or fourth year engineering, science or mathematics courses until they have achieved second year status. Similarly, to take some specific engineering, science and mathematics courses in third or fourth year, that year status must be achieved. For additional information on prerequisites, see the individual course descriptions.

## Time Limit

The Bachelor of Engineering degree must be completed within eight calendar years of initial registration. Students who do not complete their program requirements within this limit will be given the status Continue in Alternate.

## Academic Appeals

The Engineering Committee on Admission and Studies handles all academic appeals.

## Regulations (B.I.D.)

The regulations presented in this section apply to all students in the Bachelor of Industrial Design program.
In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

## Year Status and General Prerequisites

In the Bachelor of Industrial Design degree program, year status is defined as follows:

1st year: Admission to the program.
2nd year: Successful completion of IDES 1001, IDES 1301 and must not be deficient in any more than one of the other first year courses.
3rd year: Successful completion of of IDES 2302 and all first and second year course requirements.
4th year: Successful completion of IDES 3302 and all third year course requirements.

## Regulations (B.I.T.)

The regulations presented in this section apply to all students in the Bachelor of Information Technology program.
In addition to the program requirements, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (consult the Academic Regulations of the University section of this Calendar).

## Joint Status

A student registered in the BIT degree has student status at both Algonquin College and Carleton University. At Algonquin College the student is considered to be a postsecondary student; at Carleton University, the student is considered to be a degree student. Students registered in the BIT degree have access to all student services on the Carleton University campus and selected services on the Algonquin College campus.

## Academic Regulations

The academic regulations governing the B.I.T. are the academic regulations of Carleton University. These regulations are defined in full in the Academic Regulations of the University section of this Calendar and apply to B.I.T. students on both campuses. Within the context of these regulations, B.I.T. is considered to be a General degree with a defined Major CGPA and requires 20.0 credits. Courses with the designations BIT, NET or IMD are not normally transferable to Engineering, Computer Science or other programs at Carleton University.

Students should note that there are significant differences between the academic regulations of Carleton University and Algonquin College; it is the regulations of Carleton University that apply in all cases as related both to course registrations and program rules.
At Carleton University, the chief examination officer of the BIT is the Dean of Engineering and Design. At Algonquin College, grades are approved by the Dean of the respective School.

## Graduation

In order to graduate with the Bachelor of Information Technology Degree and the Advanced Diploma of Technology or Advanced Diploma of Applied Arts, the student must:

1. satisfy all requirements for the program of study;
2. be recommended for graduation by Bachelor of Information Technology Academic Council;
3. be approved for graduation by the Senate of Carleton University;
4. be approved for graduation by the Registrar of Algonquin College.

## Discipline

The regulations, procedures and sanctions that apply to student discipline on either campus, both concerning Instructional Offences and Offences of Conduct are those of Carleton University and are described in the Carleton University Undergraduate Calendar. However, while students are on Algonquin's campus, they are expected to follow Algonquin's Directives regarding Student Misconduct and Use of Electronic Devices.

## Regulations (B.J.)

In addition to the program requirements described here, students must satisfy the University regulations including the process of Academic Performance Evaluation.

Students should consult with the School when planning their program and selecting courses.
Note: students who already hold an undergraduate degree in another field are not eligible to apply for the B.J. (Honours) program. These students should consult the information on the Master of Journalism or the Master of Arts in Communication in the Graduate Calendar.

## Graduation Requirements

In addition to the graduation requirements of the Faculty, a candidate for the degree of Bachelor of Journalism with Honours must have:

1. a Major CGPA of at least 6.50 ,
2. a minimum grade of $C$ in each of the 2000-level and above JOUR courses required in the Major;
3. an Overall CGPA of at least 6.50, and
4. the recommendation of the School of Journalism and Communication for graduation.

## Prohibited Courses

Courses below the 1000-level may not be used for credit in Journalism programs.

## Regulations (B.Sc.)

The regulations presented in this section apply to all Bachelor of Science programs. In addition to the requirements presented here, students must satisfy the University regulations common to all undergraduate students including the process of Academic Performance Evaluation (see the Academic Regulations of the University section of this Calendar).

## Breadth Requirement for the B.Sc.

Students in Bachelor of Science Honours, Major, or General programs must present the following credits at graduation:

1. 2.0 credits in Science Continuation courses not in the major discipline or disciplines;
2. 2.0 credits in approved courses outside of the faculties of Science and Engineering and Design (but may include NSCI 1000)
In most cases, the requirements for individual B.Sc. programs, as stated in this Calendar, contain these requirements, explicitly or implicitly.
Students admitted to B.Sc. programs by transfer from another institution must present at graduation (whether taken at Carleton or elsewhere):
3. 2.0 credits in approved courses outside of the faculties of Science and Engineering and Design (but may include NSCI 1000) if, on transfer, the student received credit for fewer than 10.0 credits.
4. 1.0 credit in approved courses outside of the faculties of Science and Engineering and Design (but may include NSCI 1000) if, on transfer, the student received credit for 10.0 or more credits.

## Declared and Undeclared Students

Students who are registered in a program within the degree are called Declared students. Most students designate a program of study when they first apply for admission and so begin their studies as Declared students. Students may also choose to begin their studies within the B.Sc. degree without being registered in a program. These students are referred to as Undeclared students. The recommended course pattern for Undeclared students is provided in the Undeclared entry of the Programs section of this Calendar. Undeclared students normally must apply to enter a program before beginning their second year of study. The Science Student Success Centre (SSSC) provides Undeclared students guidance to the appropriate support services in making this decision.

## Change of Program within the B.Sc. Degree

Students may transfer to a program within the B.Sc. degree if upon entry to the new program they would be in good academic standing.
Other applications for change of program will be considered on their merits; students may be accepted in the new program in Good Standing or on Academic Warning.
Applications to declare or change their program within the B.Sc. Degree must be made online through Carleton Central by completing a Change of Program Elements (COPE) application form within the published deadlines. Acceptance into a program or into a program element or option is subject to any enrolment, and/or specific program, program element or option requirements as published in the relevant Calendar entry.

## Minors, Concentrations and Specializations

Students may add a minor, concentration or specialization by completing a Change of Program Elements (COPE) application form online through Carleton Central. Acceptance into a minor, concentration or specialization requires that the student be in Good Standing and is subject to any specific requirements of the intended

Minor, Concentration or Specialization as published in the relevant Calendar entry.

## Experimental Science Requirement

Students in B.Sc. Honours, Major, or General degree programs must present at graduation at least two full credits of experimental science chosen from two different departments or institutes from the list below:

| Approved Experimental Science Courses |  |
| :---: | :---: |
| Biochemistry |  |
| BIOC 2200 [0.5] | Cellular Biochemistry |
| BIOC 4001 [0.5] | Methods in Biochemistry |
| BIOC 4201 [0.5] | Advanced Cell Culture and Tissue Engineering |
| Biology |  |
| BIOL 1103 [0.5] | Foundations of Biology I |
| BIOL 1104 [0.5] | Foundations of Biology II |
| BIOL 2001 [0.5] | Animals: Form and Function |
| BIOL 2002 [0.5] | Plants: Form and Function |
| BIOL 2104 [0.5] | Introductory Genetics |
| BIOL 2200 [0.5] | Cellular Biochemistry |
| BIOL 2600 [0.5] | Introduction to Ecology |
| Chemistry |  |
| CHEM 1001 [0.5] | General Chemistry I |
| CHEM 1002 [0.5] | General Chemistry II |
| CHEM 1005 [0.5] | Elementary Chemistry I |
| CHEM 1006 [0.5] | Elementary Chemistry II |
| CHEM 2103 [0.5] | Physical Chemistry I |
| CHEM 2203 [0.5] | Organic Chemistry I |
| CHEM 2204 [0.5] | Organic Chemistry II |
| CHEM 2206 [0.5] | Organic Chemistry IV |
| CHEM 2302 [0.5] | Analytical Chemistry I |
| CHEM 2303 [0.5] | Analytical Chemistry II |
| CHEM 2800 [0.5] | Foundations for Environmental Chemistry |
| Earth Sciences |  |
| ERTH 1006 [0.5] | Exploring Planet Earth |
| ERTH 1009 [0.5] | The Earth System Through Time |
| ERTH 2102 [0.5] | Mineralogy to Petrology |
| ERTH 2404 [0.5] | Engineering Geoscience |
| ERTH 2802 [0.5] | Field Geology I |
| ERTH 3111 [0.5] | Vertebrate Evolution II |
| ERTH 3112 [0.5] | Vertebrate Evolution I |
| ERTH 3204 [0.5] | Mineral Deposits |
| ERTH 3205 [0.5] | Physical Hydrogeology |
| ERTH 3806 [0.5] | Structural Geology |
| Food Sciences |  |
| FOOD 3001 [0.5] | Food Chemistry |
| FOOD 3002 [0.5] | Food Analysis |
| FOOD 3005 [0.5] | Food Microbiology |
| Geography |  |
| GEOG 1010 [0.5] | Global Environmental Systems |
| GEOG 3108 [0.5] | Soil Properties |
| Neuroscience |  |
| NEUR 3206 [0.5] | Sensory and Motor Neuroscience |
| NEUR 3207 [0.5] | Integrative Neuroscience |
| NEUR 4600 [0.5] | Advanced Lab in Neuroanatomy |

## Physics

PHYS 1001 [0.5] Foundations of Physics I
PHYS 1002 [0.5] Foundations of Physics II
PHYS 1003 [0.5] Introductory Mechanics and Thermodynamics
PHYS 1004 [0.5] Introductory Electromagnetism and Wave Motion
PHYS 1007 [0.5] Elementary University Physics I
PHYS 1008 [0.5] Elementary University Physics II
PHYS 2202 [0.5] Wave Motion and Optics
PHYS 2604 [0.5] Modern Physics I
PHYS 3007 [0.5] Third Year Physics Laboratory:
Selected Experiments and Seminars
PHYS 3606 [0.5] Modern Physics II
PHYS 3608 [0.5] Modern Applied Physics

## Course Categories for B.Sc. Programs

## Science Geography Courses

GEOG 1010 [0.5] Global Environmental Systems
GEOG 2006 [0.5] Introduction to Quantitative Research
GEOG 2013 [0.5] Weather and Water
GEOG 2014 [0.5] The Earth's Surface
GEOG 3003 [0.5] Quantitative Geography
GEOG 3010 [0.5] Field Methods in Physical Geography
GEOG 3102 [0.5] Geomorphology
GEOG 3103 [0.5] Watershed Hydrology
GEOG 3104 [0.5] Principles of Biogeography
GEOG 3105 [0.5] Climate and Atmospheric Change
GEOG 3106 [0.5] Aquatic Science and Management
GEOG 3108 [0.5] Soil Properties
GEOG 4000 [0.5] Field Studies
GEOG 4005 [0.5] Directed Studies in Geography
GEOG 4013 [0.5] Cold Region Hydrology
GEOG 4017 [0.5] Global Biogeochemical Cycles
GEOG 4101 [0.5] Two Million Years of Environmental Change
GEOG 4103 [0.5] Water Resources Engineering
GEOG 4104 [0.5] Microclimatology
GEOG 4108 [0.5] Permafrost

## Science Psychology Courses

PSYC 2001 [0.5] Introduction to Research Methods in Psychology
PSYC 2002 [0.5] Introduction to Statistics in Psychology
PSYC 2700 [0.5] Introduction to Cognitive Psychology
PSYC 3000 [1.0] Design and Analysis in Psychological Research
PSYC 3506 [0.5] Cognitive Development
PSYC 3700 [1.0] Cognition (Honours Seminar)
PSYC 3702 [0.5] Perception
PSYC 2307 [0.5] Human Neuropsychology I
PSYC 3307 [0.5] Human Neuropsychology II
Science Continuation Courses

A course at the 2000 level or above may be used as a Science Continuation credit in a B.Sc. program if it is not in the student's major discipline, and is chosen from the following:
BIOC (Biochemistry)
BIOL (Biology)
CHEM (Chemistry)
COMP (Computer Science) A maximum of two half-credits at the 1000-level in COMP, excluding COMP 1001 may be used as Science Continuation credits.
ERTH (Earth Sciences), except ERTH 2415 which may be used only as a free elective for any B.Sc. program. Students in Earth Sciences programs may use ERTH 2401, ERTH 2402, and ERTH 2403 only as free electives.
Engineering. Students wishing to register in
Engineering courses must obtain the permission of the
Faculty of Engineering and Design.
ENSC (Environmental Science)
FOOD (Food Science and Nutrition)
GEOM (Geomatics)
HLTH (Health Sciences)
MATH (Mathematics)
NEUR (Neuroscience)
PHYS (Physics), except PHYS 2903
Science Geography Courses (see list above)
Science Psychology Courses (see list above)
STAT (Statistics)
TSES (Technology, Society, Environment) except
TSES 2305. Biology General, Major, and Honours
students may use these courses only as free electives.
Integrated Science and Environmental Science
students may include these courses in their programs but may not count them as part of the Science
Sequence.

## Science Faculty Electives

Science Faculty Electives are courses at the 1000-4000 level chosen from:

BIOC (Biochemistry)
BIOL (Biology) Biochemistry students may use
BIOL 1010 and BIOL 2005 only as free electives
CHEM (Chemistry) except CHEM 1003, CHEM 1004 and CHEM 1007
COMP (Computer Science) except COMP 1001
ERTH (Earth Sciences) except ERTH 1010, ERTH 1011
and ERTH 2415. Earth Sciences students may use ERTH 2401, ERTH 2402, and ERTH 2403 only as free electives.
Engineering
ENSC 2001
FOOD (Food Science and Nutrition)
GEOM (Geomatics)
HLTH (Health Science)
MATH (Mathematics)
NEUR (Neuroscience)
PHYS (Physics) except PHYS 1901, PHYS 1902,
PHYS 1905, PHYS 2903
Science Geography (see list above)
Science Psychology (see list above)

STAT (Statistics)
TSES (Technology, Society, Environment) Biology General, Major and Honours students may use these courses only as free electives.

## Advanced Science Faculty Electives

Advanced Science Faculty Electives are courses at the 2000-4000 level chosen from the Science Faculty Electives list above.

Approved Courses Outside the Faculties of Science and Engineering and Design (may include NSCI 1000)

All courses offered by the Faculty of Arts and Social Sciences, the Faculty of Public Affairs, and the Sprott School of Business are approved as Arts or Social Sciences courses EXCEPT FOR: All Science Geography courses (see list above), all Geomatics (GEOM) courses, all Science Psychology courses (see list above). NSCI 1000 may be used as an Approved Course Outside the Faculties of Science and Engineering and Design.

## Free Electives

Any course is allowable as a Free Elective providing it is not prohibited (see below). Students are expected to comply with prerequisite requirements and enrolment restrictions for all courses as published in this Calendar.
Courses Allowable Only as Free Electives in any

## B.Sc. Program

CHEM 1003 [0.5] The Chemistry of Food, Health and Drugs
CHEM 1004 [0.5] Drugs and the Human Body
CHEM 1007 [0.5] Chemistry of Art and Artifacts
ERTH 1010 [0.5] Our Dynamic Planet Earth
ERTH 1011 [0.5] Evolution of the Earth
ERTH 2415 [0.5] Natural Disasters
ISCI 1001 [0.5] Introduction to the Environment
ISCI 2000 [0.5] Natural Laws
ISCI 2002 [0.5] Human Impacts on the Environment
MATH 0107 [0.5] Algebra and Geometry
PHYS 1901 [0.5] Planetary Astronomy
PHYS 1902 [0.5] From our Star to the Cosmos
PHYS 1905 [0.5] How Things Work: Physics in Everyday Life
PHYS 2903 [0.5] Physics and the Imagination

## Prohibited Courses

The following courses are not acceptable for credit in any B.Sc. program:

COMP 1001 [0.5] Introduction to Computational Thinking for Arts and Social Science Students
MATH 0005 [0.5] Precalculus: Functions and Graphs
MATH 0006 [0.5] Precalculus: Trigonometric Functions and Complex Numbers
MATH 1009 [0.5] Calculus: with Applications to Business
MATH 1119 [0.5] Linear Algebra: with Applications to Business
MATH 1401 [0.5] Elementary Mathematics for Economics I
MATH 1402 [0.5] Elementary Mathematics for Economics II

