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**Faculty of Science and Engineering - Keele Campus**

**I. Undergraduate Degree and Certificate Programs**

**II. Advising, Enrolment, Registration, Graduation and  
Other Administrative Procedures**

**III. Regulations Governing Examinations and  
Academic Standards**

**IV. Regulations Governing Undergraduate Degree Requirements**

**V. Programs of Study**

# Faculty of Science and Engineering

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N.J. Cercone

## Associate Deans:

J. Amanatides (July to December), R. Hornsey, W. Tholen, P.J. Wilson (January 2008)

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## Office of Science Academic Services:

352 Lumbers, 416-736-5085

## I. Undergraduate Degree and Certificate Programs

### Undergraduate Degree Programs

Honours Bachelor of Applied Science (Honours BASc) Program, which requires at least four years of full-time study and at least 120 credits, and involves study in one of four Engineering Streams: computer engineering, engineering physics, geomatics engineering or space engineering.

Honours Bachelor of Science (Honours BSc) Programs, which are usually completed in four years of full-time study, require at least 120 credits and may involve varying degrees of concentration in one or two declared subject areas:

- Specialized Honours with one declared major in applied mathematics, biochemistry, biology, biophysics, chemistry, computational mathematics, computer science, computer security, earth and atmospheric science, environmental science, geography, international dual degree – mathematics and statistics, mathematics, mathematics for education, physics and astronomy, science and technology studies, or statistics;
- Honours major with one declared major in applied mathematics, biology, chemistry, computer science, mathematics, mathematics for education or physics and astronomy;
- Honours Double Major (intra-Faculty) with declared science majors in two of applied mathematics, biology, chemistry, computer science, earth and atmospheric science, geography (in combination with earth and atmospheric science only), mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; (*Note: some combinations may require more than 120 credits.*)
- Honours Double Major (Science/Arts inter-Faculty) with a declared science major in applied mathematics, earth and atmospheric science, mathematics, mathematics for education, physics and astronomy, science and technology studies or statistics; and a declared arts major in one of anthropology, children's studies, classical studies, classics, cognitive science, creative writing, criminology, East Asian studies, economics, English, French studies, German, German studies, Greek, health and society, Hellenic studies, history, humanities, international development studies, Italian studies, labour studies, Latin, law and society, linguistics, philosophy, political science, professional writing, religious studies, Russian, sociology, Spanish, urban studies, women's studies; (*Note: choice of majors is subject to timetabling constraints. Some combinations may require more than 120 credits.*)
- Honours Double Major (Science/Atkinson inter-Faculty) with a declared science major in earth and atmospheric science, physics and astronomy, or science and technology studies; and a declared major in the Atkinson Faculty of Liberal and Professional Studies in one of Canadian studies, culture and expression, English, history, humanities, religious studies, women's studies.
- Honours Double Major (Science/Health inter-Faculty) with a declared science major in applied mathematics, biology, chemistry, computer science, earth and atmospheric science, mathematics, mathematics for education, physics and astronomy, science and technology

studies, or statistics; and a declared Health major in kinesiology and health science or psychology.

- Honours Major/Minor (intra-Faculty) with a declared science major in one of applied mathematics, biology (including the biomedical science stream), chemistry, computer science, earth and atmospheric science, geography, mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; and a declared science minor in one of applied mathematics, biology, chemistry, computer science, earth and atmospheric science, geography, mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; (*Note: major/minor combinations with the major and minor in the same subject area are not permitted.*)
- Honours Major/Minor (Science/Arts inter-Faculty) with a declared science major in one of applied mathematics, biology, chemistry, earth and atmospheric science, mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; and a declared arts minor in one of African studies, anthropology, children's studies, classical studies, classics, creative writing, East Asian studies, economics, English, European studies, French studies, German, German studies, Greek, health and society, Hellenic studies, history, humanities, international development studies, Italian studies, labour studies, Latin, Latin American and Caribbean studies, linguistics, philosophy, political science, religious studies, Russian, Russian studies, sexuality studies, social and political thought, sociology, South Asian studies, Spanish, urban studies, women's studies; (*Note: choice of major and minor is subject to timetabling constraints.*)
- Honours Major/Minor (Science/Atkinson inter-Faculty) with a declared science major in one of biology, chemistry, earth and atmospheric science, physics and astronomy, science and technology studies; and a declared major in the Atkinson Faculty of Liberal and Professional Studies in one of Canadian studies, culture and expression, English, history, humanities, religious studies, sexuality studies, women's studies.
- Honours Major/Minor (Science/Environmental Studies inter-Faculty) with a declared science major in one of applied mathematics, biology, chemistry, earth and atmospheric science, mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; and a declared minor in environmental studies;
- Honours Major/Minor (Science/Fine Arts inter-Faculty) with a declared science major in one of applied mathematics, biology, chemistry, computer science, earth and atmospheric science, mathematics, mathematics for education, physics and astronomy, science and technology studies, statistics; and a declared fine arts minor in one of dance, film and video, fine arts cultural studies, music, theatre, visual arts; (*Note: choice of major and minor is subject to timetabling constraints.*)
- Honours Major/Minor (Science/Health) with a declared science major in one of applied mathematics, biology, chemistry, computer science, earth and atmospheric science, geography, mathematics, mathematics for education, physics and astronomy, science and technology studies, or statistics and a declared health minor in kinesiology and health science or psychology.
- Honours Science with no declared major, for the student who wishes to enrol in a broader range of courses at the 3000 and 4000 levels than can normally be undertaken in Specialized Honours, Honours Double Major or Honours Major/Minor programs.

International Bachelor of Science (iBSc) programs, which require at least four years of full-time study, at least 120 credits, and one or two exchange terms abroad as a full-time student at an institution with which York has a formal exchange agreement:

- Specialized Honours, with one declared major in biology;
- Honours major with one declared major in computer science.

Bachelor of Science (BSc) Programs, which are usually completed in three years of full-time study, require at least 90 credits and usually involve limited concentration in only one declared subject area:

- Bachelor with one declared major in applied mathematics, biology, chemistry, computer science, earth and atmospheric science, geography, international dual degree – mathematics and statistics,

mathematics, physics and astronomy, science and technology studies, or statistics;

- Bachelor with no declared major for the student who wishes to enrol in a broader range of courses at the 3000 and 4000 levels than can normally be undertaken in BSc programs;
- Students may choose to major or minor in a specific subject when they enter the University, or they may wait until they have completed up to 24 credits. At this point, students must choose a major and possibly a minor, but subsequent changes are possible. In selecting courses, students who are undecided should try to take introductory courses in a number of potential major subjects. This will allow them to proceed in their subject(s) of choice without the possibility of a delay. Some departments will not permit undecided majors to enrol in their courses.

Bachelor of Science in Technology (BSc (Tech)). Bachelor in applied biotechnology, offered jointly with Seneca College.

## Joint Study Programs

### Science and Arts

The Faculty of Science and Engineering and the Faculty of Arts jointly offer Honours Double Major and Honours Major/Minor programs where the major is from one Faculty and the second major or the minor from the other Faculty.

A student in the Faculty of Science and Engineering who has completed 24 credits in a BSc Honours program and satisfies the Faculty of Science and Engineering academic standards to proceed in Honours may combine the study of a science major and an arts major or minor in a BSc Honours Double Major or Honours Major/Minor program. Corresponding programs involving an arts major and a science major or minor lead to BA Honours Double Major or Honours Major/Minor degrees in the Faculty of Arts. All Honours programs require a minimum of 120 credits which can normally be completed in four years of full-time study.

For a list of possible subject combinations for the BSc Honours degree programs, see Undergraduate Degree Programs above. For details of the science major and minor requirements in specific subject areas, see the Faculty of Science and Engineering Programs of Study section of this calendar. For details of the arts major and minor requirements in specific subject areas, and for the requirements for BA Honours programs, see the Faculty of Arts Programs of Study section of this calendar.

### Science and Atkinson

The Faculty of Science and Engineering and the Atkinson Faculty of Liberal and Professional Studies jointly offer Honours Double Major and Honours Major/Minor programs where the major is from one Faculty and the second major or the minor from the other Faculty.

A student in the Faculty of Science and Engineering who has completed 24 credits in a BSc Honours program and satisfies the Faculty of Science and Engineering academic standards to proceed in Honours may combine the study of a science major and an Atkinson major or minor in a BSc Honours Double Major or Honours Major/Minor program. Corresponding programs involving an Atkinson major and a science major or minor lead to BA Honours Double Major or Honours Major/Minor degrees in the Atkinson Faculty of Liberal and Professional Studies. All Honours programs require a minimum of 120 credits which can normally be completed in four years of full-time study.

For a list of possible subject combinations for the BSc Honours degree programs, see Undergraduate Degree Programs above. For details of the science major and minor requirements in specific subject areas, see the Faculty of Science and Engineering Programs of Study section of this calendar. For details of the Atkinson major and minor requirements in specific subject areas, and for the requirements for BA Honours programs, see the Atkinson Faculty of Liberal and Professional Studies Programs of Study section of this calendar.

### Science and Education

A student wishing to obtain the professional certification required to teach in Ontario schools may take both teacher training and an undergraduate academic program concurrently. This does not shorten the time required

to gain the qualification but provides a better chance for the student to relate theory and practice and to have more opportunity to gain practical experience than is possible in a one-year program.

A student in science who is presently enrolled in first year (at least 24 credits) or has a minimum of 36 credits remaining in the BSc or BSc Honours, with an overall standing of at least 5.0 (C+) may apply to coregister in the Faculty of Education. A coregistered student normally takes one and a half or two full courses in the Faculty of Education in an academic year concurrent with courses for the BSc or BSc Honours. The specific study program of each student is subject to the approval of both Faculties.

Upon successful completion of the course requirements for a BSc or BSc Honours, and of the required education courses, a coregistered student is awarded a BSc or BSc Honours and a BEd.

## Science and Environmental Studies

The Faculty of Science and Engineering and the Faculty of Environmental Studies jointly offer Honours Major/Minor programs where the major is from one Faculty and the minor from the other Faculty.

A student in the Faculty of Science and Engineering who has completed 24 credits in a BSc Honours program and satisfies the Faculty of Science and Engineering academic standards to proceed in Honours may combine the study of a science major and an environmental studies minor in a BSc Honours Major/Minor degree program. A corresponding program including a major in environmental studies and a science minor leads to a BES Honours Major/Minor degree in the Faculty of Environmental Studies. Both programs require a minimum of 120 credits which can normally be completed in four years of full-time study.

For a list of possible science majors for the BSc Honours degree program, see the Undergraduate Degree Programs section above. For details of the science major and minor requirements in specific subject areas, see the Faculty of Science and Engineering Programs of Study section of this calendar. For details of the requirements for a minor in environmental studies within the BSc Honours degree program, and for the requirements for BES Honours programs, see the Faculty of Environmental Studies Degree Requirements section of this calendar.

## Science and Fine Arts

The Faculty of Science and Engineering and the Faculty of Fine Arts jointly offer Honours Major/Minor programs where the major is from one Faculty and the minor is from the other Faculty.

A student in the Faculty of Science and Engineering who has completed 24 credits in a BSc Honours program and satisfies the Faculty of Science and Engineering academic standards to proceed in Honours may combine the study of a science major and a fine arts minor in a BSc Honours Major/Minor degree program. A corresponding program including a fine arts major and a science minor leads to a BA or BFA Honours Major/Minor degree in the Faculty of Fine Arts. All Honours programs require a minimum of 120 credits which can normally be completed in four years of full-time study.

For a list of possible subject combinations for the BSc Honours degree program, see the Undergraduate Degree Programs section above. For details of the science major and minor requirements in specific subject areas, see the Faculty of Science and Engineering Programs of Study section of this calendar. For details of the fine arts minor and major requirements in specific subject areas, and for the requirements for Fine Arts BA Honours and BFA Honours degree programs, see the Faculty of Fine Arts Degree Requirements and Programs of Study sections of this calendar.

## Science and Health

The Faculty of Science and Engineering and the Faculty of Health jointly offer Honours Double Major and Honours Major/Minor programs where the major is from one Faculty and the second major or the minor from the other Faculty.

A student in the Faculty of Science and Engineering who has completed 24 credits in a BSc Honours program and satisfies the Faculty of Science and Engineering academic standards to proceed in Honours may combine the study of a science major and a health major or minor in a BSc Honours

Double Major or Honours Major/Minor program. All Honours programs require a minimum of 120 credits which can normally be completed in four years of full-time study.

For a list of possible subject combinations for the BSc Honours degree program, see the Undergraduate Degree Programs section above. For details of the science major and minor requirements in specific subject areas, see the Faculty of Science and Engineering Programs of Study section of this calendar. For details of the health major and minor requirements in specific subject areas, see the Faculty of Health Degree Requirements and Programs of Study sections of this calendar.

## Certificate Programs

York University undergraduate certificate programs are open to all undergraduate students, subject to student eligibility and course availability. The following certificates are offered by departments affiliated with the Faculty of Science and Engineering and can be taken concurrently with a BSc Honours degree program. Several of the certificates can also be taken concurrently with a BSc degree program. Some are open to visiting students. See information below.

### Certificate in Geographic Information Systems (GIS) and Remote Sensing

Registered BSc Honours and BSc candidates, and visiting students, may work towards a Certificate in Geographic Information Systems (GIS) and Remote Sensing, offered jointly by the Department of Earth and Space Science and Engineering of the Faculty of Science and Engineering, the Department of Geography of the Faculty of Arts, and the Faculty of Environmental Studies. The certificate program includes three streams, one offered through each of the three units above. BSc Honours or BSc candidates majoring in earth and atmospheric science, environmental science or geography can work concurrently towards the certificate and a BSc Honours or BSc degree.

The certificate requirements for BSc and BSc Honours candidates are as follows.

#### Earth and Atmospheric Science Stream

SC/EATS 1010 3.00; SC/EATS 1011 3.00; SC/GEOG 2420 3.00; SC/EATS 3300 3.00; AS/GEOG 3440 3.00; SC/EATS 4220 3.00; SC/EATS 4400 3.00; three credits (approved by the Department of Earth and Space Science and Engineering) chosen from the following courses: SC/EATS 4230 3.00, ES/ENVS 3011 3.00, SC/GEOG 2130 3.00, AS/GEOG 3140 3.00, SC/GEOG 3421 3.00, AS/GEOG 4240 3.00.

#### Geography Stream

SC/GEOG 1400 6.00 or AS/GEOG 1410 6.00; SC/GEOG 2420 3.00; SC/GEOG 3180 3.00; AS/GEOG 3440 3.00; SC/EATS 4340 3.00; AS/GEOG 4440 3.00; three credits (approved by the Department of Geography) chosen from the following courses: SC/EATS 4220 3.00, SC/EATS 4230 3.00, ES/ENVS 3011 3.00, SC/GEOG 2130 3.00, AS/GEOG 3140 3.00, SC/GEOG 3421 3.00, AS/GEOG 4240 3.00.

For the requirements for the Environmental Studies Stream, refer to the environmental studies section of the York Undergraduate Programs Calendar.

To be eligible to receive the certificate, students must achieve a minimum credit-weighted grade point average of 6.0 (B) over the 24 York University credits required for the certificate in one of the three streams. Degree candidates must also achieve and maintain honours standing in their academic degree program.

For additional information, consult on the three units mentioned above.

### Certificate in Meteorology

Registered BSc Honours candidates and visiting students, who are interested in careers in atmospheric science (meteorology) and who satisfy the certificate program admission requirements may work towards a Certificate in Meteorology offered by the Department of Earth and Space Science and Engineering. Normally, a student registered in the Atmospheric Science Stream of the department works concurrently towards a certificate and a BSc Honours degree. However, the program is open to any student who satisfies the program admission requirements. Entrance to the program requires the candidate to have successfully

completed at least 54 approved credits (nine approved full courses) in the areas of physical science and mathematics.

The certificate requirements are as follows: SC/EATS 3030 3.00; SC/EATS 3040 3.00; SC/EATS 4050 3.00; SC/EATS 4051 3.00; SC/EATS 4120 3.00; SC/EATS 4140 3.00; 12 credits chosen from the following courses: SC/EATS 3130 3.00, SC/EATS 3280 3.00, SC/EATS 4020 3.00, SC/EATS 4130 3.00, SC/EATS 4150 3.00, SC/EATS 4160 3.00, SC/EATS 4220 3.00, SC/EATS 4230 3.00, SC/EATS 4240 3.00, SC/GEOG 4205 3.00, SC/GEOG 4210 3.00, SC/GEOG 4310 3.00, SC/MATH 4141 3.00, SC/MATH 4142 3.00, SC/PHYS 4120 3.00.

In order to receive the certificate, the student must achieve a minimum credit-weighted grade point average of 4.0 (C) or better over the 30 credits required for the certificate.

For additional information, consult the Department of Earth and Space Science and Engineering.

## II. Advising, Enrolment, Registration, Graduation and Other Administrative Procedures

### Student Responsibility

Every effort is made in the Faculty of Science and Engineering to ensure that each student receives academic advice and sufficient information to guide in course selection and program choice. Within this context, the student is solely responsible for the following:

- ensuring that the courses chosen in consultation with an adviser meet all program (refer to the Faculty of Science and Engineering Programs of Study section of this calendar) and degree (refer to the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar) requirements for graduation;
- ensure the courses they choose meet prerequisites and are not exclusions or equivalents of other courses already taken;
- verifying the accuracy of registration records, including all course changes;
- fulfilling the requirements and being aware of academic progress in all registered courses;
- noting and abiding by the sessional deadline dates published on the Current Students Web page each year, especially course change deadline dates.

### Advising

Before each academic session begins, every science student can meet with an adviser to discuss program and degree requirements. However, it is the responsibility of all students to familiarize themselves with both the requirements of their individual programs of study (refer to the Faculty of Science and Engineering Programs of Study section of this calendar) and the regulations governing their BSc, BSc (Tech), BSc Honours, BASc or iBSc degree requirements (refer to the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar).

In preparation for enrolment, and at the advising appointment, the following should be considered:

**Choice of subject area(s).** Every student must choose one or two subject area(s) according to personal interests and career goals.

**Choice of program.** All students who have completed 24 or more credits must choose a program (Bachelor, Specialized Honours, Honours major, Honours Double Major or Honours Major/Minor) in accordance with general regulation 3 in the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar. Minimum grade point average requirements for Honours programs are detailed under Academic Standards for BSc and BSc Honours Degree Programs in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar and in the program of study requirements in the Faculty of Science and Engineering Programs of Study section of this calendar. See also

Designation of Honours or Bachelor Program in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar.

**Faculty of Science and Engineering degree requirements and regulations.** Refer to the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar.

**Course selection at the 1000 level.** For first-year students, the 1000-level (entry-level) BSc and BSc Honours program is a multidisciplinary one. Students take introductory courses, consistent with their levels of background preparation, which are planned to prepare them well for more advanced study in the subject areas of their choice. Most introductory courses carry prerequisites, normally at the OAC or 12U level.

The course requirements at the 1000 level are governed by Faculty general regulation 4 (see the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar) and are outlined in items i) and ii) under the program of study requirements for each subject area and applied science stream in the Faculty of Science and Engineering Programs of Study section of this calendar. These Faculty regulations ensure that students' choices from the roster of introductory offerings provide an adequate and appropriate breadth in science, help students to develop basic computational, mathematical and laboratory skills, and also an appreciation of the humanities and social sciences.

Unless stated otherwise in the program of study requirements in the Faculty of Science and Engineering Programs of Study section of this calendar, Honours Double Major candidates are expected to complete all 1000-level requirements for both majors, excepting course credit exclusions.

Unless stated otherwise in the program of study requirements in the Faculty of Science and Engineering Programs of Study section of this calendar, the 1000-level science requirements for Honours Major/Minor programs are those of the major subject, plus or including any required 1000-level courses in the minor subject and any 1000-level courses which are required as prerequisites or corequisites for required courses in the minor, excepting course credit exclusions.

Since the normal yearly full-time credit load for BSc and BSc Honours candidates is 30 credits (somewhat higher for BASc Honours candidates), it will not be possible for the student to complete all the 1000-level requirements for any degree program in year one. Certain specific courses should be taken in year one as prerequisites for required 2000-level courses or as an introduction to the major or minor subject area. It is advisable to complete as many of the other required 1000-level science courses as possible in year one to avoid timetable conflicts in later years.

In some circumstances, equivalent courses approved in writing by the major program(s) may be substituted for the courses listed.

**Course selection above the 1000 level.** Complete details of the course requirements for all BSc and BSc Honours subject areas and programs are found in the Faculty of Science and Engineering Programs of Study section of this calendar. Degree checklists for all BSc and BSc Honours programs/subject areas are available from the Office of Science Academic Services.

**Prerequisites/corequisites.** Most science courses have prerequisite and/or corequisite requirements. These may be specific courses (indicating specific required background knowledge) or they may be general prerequisites (indicating a required level of maturity in university studies in the subject area or overall).

As indicated in general regulation 2 in the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar, it is the student's responsibility to enrol in only those courses for which the student has successfully completed all designated prerequisites and to take concurrently all specified corequisites not already completed successfully. Students who lack the stated prerequisites but have reason to believe that they can succeed in a course must obtain written permission of the department concerned (consult the departmental undergraduate office regarding the procedure to be followed) before enrolling.

**Course credit exclusions.** Students should avoid enrolling in any two courses which are designated as course credit exclusions of one another, since credit will be given for only one. For more information regarding

course credit exclusions, see Course Credit Exclusions in the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar.

**Scheduling.** All information regarding courses to be offered in each session, times, places etc. is found on the York University Current Students Web site (<http://www.yorku.ca/yorkweb/cs.htm>).

## Enrolment

Students enrol in courses offered by the Faculty of Science and Engineering through the Web enrolment system. Information on how to use the system is provided on the Current Students Web site (<http://www.yorku.ca/yorkweb/cs.htm>). Access to the system is granted to newly admitted students only after the advising document has been signed.

## Transfer Credit

Transfer credit towards a York University BSc, BSc (Tech), BSc Honours, BASc or iBSc may be granted for courses taken at other accredited postsecondary institutions prior to registration at York University.

Transfer credit assessments for the Faculty of Science and Engineering are specific to the program and subject area(s) in which the student plans to enrol at York University. If the student does not enrol in the program(s) and subject area(s) specified on the admission application or, subsequent to first registration, changes subject area(s) and/or program(s), the transfer credit must be reassessed.

## Changes in Program/Subject Area(s)

Candidates may change their degree programs and/or subject area(s) from the time of their advising sessions in the spring until the tenth class day of the fall term, provided their standing, prescription of studies and timetable arrangements permit the proposed changes, and provided they are supported in writing by the academic advisers concerned. All program and subject area changes must be effected through the Registrar's Office by completion of the relevant form (available on the Current Students Web site at <http://www.yorku.ca/yorkweb/cs.htm>), signed by the new department(s). Transfer credit assessments must be reviewed after any change in program/subject area.

## Course Changes

Course changes are permitted, but only for limited periods of time, and in accordance with the sessional dates in the enrolment guides. Written permission of the course instructor(s) may be required. Students should consult their advisers regarding the effect course changes may have on the fulfilment of program and degree requirements, but it is the responsibility of the student alone to recognize the consequences of course changes on academic progress. Students are responsible for verifying their enrolment during each academic session.

## Courses Taken Outside the Faculty / Letters of Permission

A maximum of 12 credits in total may be taken during a summer session at York University and/or at another institution, a maximum of 33 credits during a fall/winter session towards a BSc, BSc Honours, BASc or iBSc.

Students should note that some departments have specific limits on the number of out-of-department or out-of-Faculty courses which may be taken for credit towards a BSc, BSc Honours, BASc or iBSc.

## York University

The student is responsible for ensuring that courses taken in another Faculty at York University fulfill program and degree requirements, are eligible for BSc, BSc Honours, BASc or iBSc credit, and observe prerequisite, corequisite and course credit exclusion restrictions.

## Other Institutions

A student wishing to take a course at an external accredited institution at any time for credit towards a York University BSc, BSc Honours, BASc or iBSc is required to obtain a letter of permission from York University prior to taking the course.

Request forms for letters of permission are available from Student Client Services or on the Current Students Web site at <http://www.yorku.ca/yorkweb/cs.htm>. The letter of permission request form, with course description(s), must be submitted to the appropriate departmental office to have the course(s) assessed for equivalents/exclusions. The completed form must then be returned to Student Client Services.

At the conclusion of the session for which a letter of permission was granted, the student must arrange for the host institution to submit either an official transcript for consideration for transfer credit, or official notice of withdrawal/non-enrolment to the Registrar's Office.

The student must obtain a grade of C or higher in the course for which a letter of permission has been granted in order to receive credit for the course in the Faculty of Science and Engineering. Passed courses, as well as failed courses completed on letters of permission are included in the student's cumulative record, although grades from such courses are not listed on York University transcripts and are not included in the calculation of York grade point averages.

Should a student leave York University to pursue study at another postsecondary institution without a letter of permission, upon return to York, a new application to York is required and all previous transfer credit will be reassessed.

## Reactivation

A student who has been absent from the University for one or more session(s) must apply to the Registrar's Office (form available on the Current Students Web site at <http://www.yorku.ca/yorkweb/cs.htm>) to be reactivated.

*Note: This does not apply to students who have failed to gain standing or have been debarred from York University or to students who have taken postsecondary courses at another institution during their absence from York University; all such students must apply, through the Admissions Office, to be re-admitted to York University.*

## Graduation

Students should apply to graduate in the calendar year in which they expect to qualify for the degree, irrespective of whether or not they plan to attend the graduation ceremony. The application to graduate form can be found on the Current Students Web site at <http://www.yorku.ca/yorkweb/cs.htm>.

The deadline dates for spring and fall graduation ensure that all potential graduates' records are assessed with care. No late applications are accepted for any reason.

A student registered in a BSc Honours program may apply to graduate with a BSc degree, provided bachelor program requirements are met.

## Degree Reclassification

A student who has completed a York University BSc degree (bachelor program) in the Faculty of Science and Engineering may continue, after graduation, in a Specialized Honours program in the same subject area or in an Honours Double Major or Honours Major/Minor program including the same subject area, provided the grade point average is that required for the Honours program.

A student who has completed a BSc Honours degree in an Honours Double Major or Honours Major/Minor program may apply for admission to a BSc Specialized Honours program in one of the (science) subject areas included in the Honours Double Major or Honours Major/Minor program. Applications for this reclassification are available from the Registrar's Office.

A student who wishes to pursue a second BSc or BSc Honours in a different field of study must apply to the Admissions Office for admission as a second degree candidate. The deadline to apply for fall admission is May 1.

## III. Regulations Governing Examinations and Academic Standards

### Grading System

Refer to Grades and Grading Schemes within the Academic Information section of this calendar.

### Pass/Fail Grading Option

A pass/fail grading option is available to Faculty of Science and Engineering students under the following guidelines.

**Academic Standing.** This option is available only to students who are in good standing (i.e. not under academic or debarment warning).

**Minimum Number of Courses Completed.** Students must have successfully completed at least 24 credits before they may apply to take a course under this option.

**Elective Courses Only.** The following types of courses may not be taken on a pass/fail basis: courses in the major and minor subject area(s), general education courses, 1000-level science courses required to satisfy the Faculty of Science and Engineering general regulation 4 (see the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section of this calendar), non-major courses required to satisfy program requirements.

**Maximum Number of Pass/Fail Credits.**

- Honours program: a maximum of 12 (passed) credits from pass/fail graded courses may be counted towards a BSc Honours degree.
- Bachelor program: a maximum of six (passed) credits from pass/fail graded courses may be counted towards a BSc degree.

**Grade Point Average Calculations.** The grade obtained (passed or failed) in a pass/fail graded course is not included in grade point average calculations in the Faculty of Science and Engineering.

**Deadline to Select Pass/Fail Option.** Eligible students may exercise the option within the first two weeks (10 class days) of the term in which the course begins. They must obtain the signature of the course director on a form to be made available from (available on the Current Students Web site at <http://www.yorku.ca/yorkweb/cs.htm>), and returned to, Student Client Services.

**Deadline to Change from Pass/Fail back to the Letter-Grade System.**

At the student's request, the student may change the designation of a course from pass/fail back to the letter-grade system until the last day for withdrawal without academic penalty from the term in which the course is offered. Formal notification, with the student's and course director's signatures, must be received by the Registrar's Office by this deadline.

### Repeated Courses

Students are allowed to repeat a passed or a failed course once for academic degree or certificate credit. Students should note that course availability and space considerations may preclude the possibility of repeating a course in the session they choose.

When a student is allowed to repeat a course for academic degree or certificate credit, the second grade will be the grade of record and the only grade calculated in the student's grade point average. Regardless of whether or not the student repeats a course a third time, the second grade remains the grade of record. Students are required to petition in order to gain permission to repeat a passed course more than once for academic credit towards a degree or certificate program. The record of both the first and second time the course was taken will appear on the student's transcript, with the first course designated as "No Credit Retained" (NCR).

Students assigned as a penalty for academic honesty an F or lowered grade as the permanent grade of record will not be allowed the benefit of excluding the impact of this 'penalty' grade from their academic average after repeating the course. Both the second grade and the original grade will contribute to the cumulative grade point average.

A student must be declared eligible to proceed in a degree or certificate program in order to be eligible to repeat a course. That is to say, when a student fails to achieve sufficient standing to proceed in a degree or



certificate program, or when they are required to withdraw, they would not be eligible to repeat a course or courses.

## Academic Standards for BSc and BSc Honours Programs

### Bachelor Programs (BSc)

**To Graduate in a Bachelor Program.** A minimum overall grade point average of 4.0 (C) is required in order to be eligible to graduate in an undergraduate bachelor program.

Students in a bachelor program who have passed 90 credits in accordance with Faculty and program requirements, but whose cumulative overall grade point average is below 4.0 (C), may attempt to raise their average by taking up to 12 additional credits, to a maximum of 102 credits. These courses must be above the 1000 level and must be taken at York University. Regulations on equivalent and excluded courses apply.

### Honours Programs (BSc Honours)

Honours students are eligible to enrol in a year according to the number of credits they have obtained (see below):

Year	Credits
Year 1	Fewer than 24 credits
Year 2	Fewer than 54 credits
Year 3	Fewer than 84 credits
Year 4	At least 84 credits

Subject to the selection criteria of the major departments, students will be registered in the Honours program who, upon completion of each academic session, have a cumulative average as follows:

Year	Cumulative overall average
1	4.00
2	4.25
3	4.80
4	5.00

Students who have taken 84 credits, and who wish to proceed in an Honours program must have a cumulative grade point average of 5.0 overall.

To graduate in an Honours program requires successful completion of all Faculty requirements and departmental required courses and a minimum cumulative credit-weighted grade point average of 5.0 (C+) over all courses completed, subject to the exception in the note below.

*Note: Some programs may require a higher standard - consult the program of study requirements in the Faculty of Science and Engineering Programs of Study section of this calendar.*

## Academic Standing Requirements for Visiting Students

Individuals who wish to enrol in undergraduate credit courses, but who do not intend to complete a degree or a certificate may be admitted to York as a Visiting Student (see the Admissions section of this calendar for more information). There are three categories of visiting students:

- those who hold an undergraduate degree (three-year bachelor's degree minimum) from an accredited university/university-level institution;
- those who **do not hold an undergraduate degree** but wish to enrol in York courses to fulfill the academic, upgrading or professional development requirements of a professional designation;
- those who are currently attending another recognized university and wish to take York courses on a letter of permission issued by their home institution.

## GPA Requirement

Students in categories a) and b) whose overall cumulative grade point average (OCGPA) falls below 4.0 on at least 24 credits attempted will not be allowed to enrol in any subsequent session as visiting students. Students who are not permitted to re-enrol must apply for re-admission through the Admissions Office.

*Note: Repeated course legislation does not apply to visiting students but only to academic degrees and certificates. Therefore, all courses attempted or taken will count in the OCGPA.*

## Credit limits

Students in category b) who have maintained an OCGPA of 4.0 throughout their studies and who have completed 30 credits will not be allowed to enrol in subsequent sessions and must either reactivate to proceed as visiting students or may choose to apply for admission to a degree or certificate program.

## Designation of Honours or Bachelor Program

**Automatic Honours Designation.** Students are automatically considered to be in an Honours program provided they achieve and maintain the minimum grade requirements for Honours described under the Academic Standards for BSc and BSc Honours Programs section above.

**Automatic Bachelor Designation.** Students are automatically considered to be in a bachelor program if they fail to achieve or maintain the minimum grade requirements for Honours described under the Academic Standards for BSc and BSc Honours Programs section above.

**Option to Graduate with a BSc Degree (Bachelor Program).** Students registered for a BSc Honours degree may opt to graduate with a BSc degree if they fulfill bachelor program requirements. See Graduation in the Faculty of Science and Engineering Advising, Enrolment, Registration, Graduation and Other Administrative Procedures section of this calendar for details.

## Examinations

Most courses in the Faculty of Science and Engineering schedule three-hour final examinations. Examinations are scheduled during day and evening hours.

Students are admitted to the examination hall five minutes before the scheduled start time and are required to present their sessional identification cards and acceptable photo identification cards when writing final examinations. Unauthorized aids may not be taken into the examination halls. No student may leave the examination hall within 15 minutes of the end of the scheduled examination period. All students must remain seated at the conclusion of the examination period until all examination answer sheets/booklets have been collected by the invigilators. Examination booklets, used and unused, must be submitted intact, with no insertions and no pages removed.

A student observed deriving assistance from any unauthorized source is subject to the procedures and penalties defined under the Senate regulations regarding academic honesty (see the University Policies and Regulations section of this calendar).

Students must maintain a standard of work in their courses of instruction satisfactory to the departments or divisions concerned, and must attend the required examinations, unless prevented by illness or by some other special circumstance.

A student who writes a final examination under duress, or who is prevented from attending an examination by illness or by some other special circumstance, must file a request for a deferred examination within the stated time limits and provide appropriate written evidence for consideration (see Deferred Examinations below).

Final examination answer sheets/booklets become the property of the teaching unit. Students have the right to review their graded tests and examinations once the grades have been published by the Registrar's Office. Students may request a copy at cost from the teaching unit.



## Deferred Examinations / Aegrotat Standing

A student may request aegrotat standing, permission to write deferred examinations (in respect of final examinations only), or permission to submit a final assignment after the Faculty's deadline for submission of term work, on the grounds of sickness or misfortune.

It is the responsibility of the student to ensure that full documentation (medical or other) is provided in support of requests for deferred standing or aegrotat standing. A request submitted on the grounds of illness must include the attending physician's statement form completed by the petitioner's physician. Appropriate forms and guidelines are available from Student Client Services or the Current Students Web site (<http://www.yorku.ca/yorkweb/cs.htm>).

**Deferred Standing Agreement.** In the Faculty of Science and Engineering, deferred standing may be arranged with the course director by means of a form called a deferred standing agreement (DSA). The DSA form and supporting documentation must normally be submitted within one week following a missed examination or the last day to submit coursework.

**Deferred Standing Petition.** A petition for deferred standing may be submitted if the course director indicates on the DSA form a refusal to approve deferred standing. The petition application, together with other written evidence to be taken into consideration, must normally be submitted to the Registrar's Office within one week following a missed examination or the last day to submit coursework.

**Aegrotat Standing Petition.** In exceptional circumstances, a petition for aegrotat standing may be submitted in cases where a student cannot be expected to complete coursework. If granted, the phrase AEG aegrotat standing is substituted for the grade on the transcript. Aegrotat standing is seldom granted in respect of final examinations; instead, the student may be granted permission to write deferred examination(s).

## Term Work

All final grades, including those assigned after deferred examinations, are calculated in a way which assigns a specific weighting to the term work done in addition to the final (or deferred) examination. The weighting is set by the course director and must be announced and available in writing within the first two weeks of classes. If possible, information about assignments and grades for all courses should be made known to students at or before the first class meeting. A previously announced marking scheme for a course may be changed by the course director with the consent of students enrolled in the course; the new marking scheme must also be distributed in written form.

Prior to the final date to withdraw from a course without receiving a grade, some graded feedback worth at least 15 per cent of the final grade for Fall, Winter or Summer Term and 30 per cent for 'full year' courses offered in the Fall/Winter Term is received by students in all courses (excepting the following: those senior undergraduate courses, such as honours theses, where course work consists of a single piece of work, practicum courses, ungraded courses, courses in Faculties where the drop date occurs within the first three weeks of classes, courses which run on a compressed schedule). Students who, in the absence of recognized extenuating circumstances, fail to complete such course work cannot use the lack of feedback as grounds for withdrawal.

The total value of any in-class test(s) or in-class examination(s) given in the last two weeks of classes in a term cannot be greater than 20 per cent of the final mark for the course.

All tests in a given section of a course must be given during the class or tutorial times listed in the lecture schedule for that section of the course. If a course director chooses to administer a test at a different time (i.e. during the class time of a different section of the course) special provisions will have to be made for students who have conflicts with the new time.

Term work in any course may not be submitted later than the first day of the final examination period for the course. Earlier final dates for the submission of term work may be set at the discretion of the department/division concerned.

The student is responsible for ensuring that all written term work is received by the instructor concerned.

## Reappraisal of Final Grades

Students may, with sufficient academic grounds, request that a final grade in a course be reappraised. Students are normally expected to first contact the course director to discuss the grade received and to request that their tangible work be reviewed. Further information may be obtained from the department/division offering the course. Students applying to have a grade reappraised in a Faculty of Science and Engineering course should note the following:

- Requests for reappraisal must be filed with the unit offering the course within 21 calendar days of the release of the final grade in the course;
- Students may request the review of specific pieces of work, or the overall course grade. Normally, however, only written work can be reassessed;
- When a student asks for reappraisal, an original grade may be raised, lowered or confirmed;
- Students wishing to request the reappraisal of a final grade should fill out the appropriate form available from the department/division offering the course and submit it to the same office;
- The decision of the department/division may be appealed to the Faculty of Science and Engineering Executive and Planning Committee only on grounds of procedural irregularity or new evidence.

## Recognition of Excellence

### Dean's Honour Roll

The annual Dean's Honour Roll recognizes academic excellence by assigning the notation "Member of Dean's Honour Roll" to the grade report and transcript of a student who achieves a sessional credit-weighted grade point average of 7.5 or higher on a minimum of 24 credits, or, in the final year of study, a minimum of 18 credits.

BSc and BSc Honours candidates coregistered in the Faculty of Education, who are registered in a minimum of 24 credits overall (of which at least 18 credits are for the BSc or BSc Honours) and who achieve a sessional credit-weighted grade point average of 7.5 or higher on their credits for the BSc or BSc Honours, are also eligible to be on the Faculty of Science and Engineering Dean's Honour Roll.

### First-Class Degrees

The Faculty of Science and Engineering rewards exceptional students by designating their degrees "first class" or "first class with distinction".

**First-class standing** is normally awarded to students whose cumulative overall credit-weighted grade point average is 7.5 or higher.

**With distinction** is normally added to the first class degree of students whose cumulative overall credit-weighted grade point average is 8.0 (A) or higher.

## Warnings and Sanctions

*Note: The following applies to students admitted to York University for Fall 2001 and subsequent sessions. Students admitted before Fall 2001 should consult the York Undergraduate Programs Calendar of the year in which they were admitted for information regarding warnings and sanctions which apply to them.*

### Academic Warning

Students whose cumulative overall grade point average falls below 4.0 (C) at the end of any session or who enter the Faculty with a grade point average equivalent to less than 4.0 (C) receive an academic warning. Students on academic warning must achieve a cumulative overall grade point average of at least 3.5 by the end of the next 30 credits in order to continue; otherwise they will have failed to gain standing.

### Failure to Gain Standing

Students are said to have failed to gain standing if their cumulative overall grade point average falls below 2.5 at any time after completion of 24 credits or if they were on academic warning and did not achieve the

cumulative overall grade point average of at least 3.5 by the end of the next 30 credits. Students who have failed to gain standing may not register for any courses unless they are re-admitted to the University. Applications for re-admission, not normally considered within one year from the date of failure to gain standing, should be made to the director of admissions.

### Debarment Warning

Students who have failed to gain standing in the Faculty of Science and Engineering, or the equivalent in another Faculty at York University or elsewhere, receive a debarment warning upon continuing their studies in the Faculty. Students on debarment warning must achieve a cumulative overall grade point average of at least 3.5 within the next 24 credits taken in order to continue. Students who do not fulfill these conditions will be debarred from the University.

### Debarment

Students who have been debarred may be re-admitted in some subsequent session only if they give convincing evidence that they can profit from university work. Applications for re-admission are not normally entertained in less than two years from the date of debarment.

### Academic Honesty

See the York University Senate regulations regarding academic honesty in the University Policies and Regulations section of this calendar. For further information contact the Office of Science Academic Services.

*Note: Students cannot drop any courses in which they have been penalized for a breach of academic honesty.*

### Petitions

Students may petition on reasonable grounds, in writing, any Faculty of Science and Engineering regulation. In some instances, circumstances affecting a student's performance in initial University course work will be accepted as grounds for petition. All enquiries about regulations and petition procedures should be addressed to the Registrar's Office. For information regarding petitions for deferred examinations, see Deferred Examinations in this section of the calendar. Petition forms must be submitted to Student Client Services.

Normally petitions for late withdrawal from a course will only be considered if they are submitted within three weeks of the release of final grades. Such petitions may be considered for a period of up to one year if they are based on special circumstances.

### Appeals Procedures

Appeals by students and/or faculty members against rulings of the Petitions Committee and/or the Committee on Examinations and Academic Standards of the Faculty of Science and Engineering (with the exception of appeals on academic honesty rulings - see below) must be filed in writing with the secretary of the appeals panel of the Executive and Planning Committee, 349 Lumbers, within 15 calendar days of the date of notification of the decision.

Appeals against rulings of the petitions committee and/or the committee on examinations and academic standing will be heard by a panel of two faculty members of the executive and planning committee and one student member selected from student members of the Faculty council. In the rare event that a decision of a panel of the executive and planning committee, or of the Senate Appeals Committee, requires a completely new (*de novo*) hearing, the matter will be heard by a panel of three faculty members of the executive and planning committee and one student member selected from student members of the Faculty council. These panels will be constituted, as required, from available members, by the secretary of the appeals panel.

Members shall disqualify themselves if they are involved as a party or witness in the case, or believe that they could not be impartial. Where members disqualify themselves, alternate members will replace them.

Appeals are heard only on the following grounds:

- a) new evidence; i.e. evidence that, through no fault of the appellant, could not reasonably have been presented at an earlier level; (As a

guide, events or performance subsequent to the decisions of the petitions committee and/or the committee on examinations and academic standing are not to be construed as new evidence.)

- b) evidence of procedural irregularity in the previous consideration of the case by the petitions committee and/or the committee on examinations and academic standing. This may be understood to include actions taken by the Faculty of Science and Engineering, its officers, committees or members with respect to the case which would violate or nullify any of the following:

- normal and written procedures of the Faculty;
- recognized custom of the Faculty;
- the principles of natural justice and fairness.

Students and faculty members have the right to represent themselves at appeal hearings to hear and answer allegations and to present their arguments. Appeal hearings are not open to anyone not directly involved in the case being considered. The committee's decision is taken in camera.

All appeal decisions are reported in writing to the students and the faculty members concerned, the Office of Science Academic Services, the home Faculty and the Registrar's Office.

Further appeals may be made to the Senate Appeals Committee. Enquiries about these appeals, and the grounds upon which they may be filed, should be directed to the Senate Office, N926 Ross.

Appeals on academic honesty rulings are also made directly to the Senate Appeals Committee. Appeals are heard only on the same grounds as cited above.

## IV. Regulations Governing Undergraduate Degree Requirements

### The Credit System

The Faculty of Science and Engineering operates under a credit system in which a prescribed number of credits, intended to reflect total workload, is associated with each course offered by the University. One lecture hour per week per term is defined as one academic credit as is one laboratory session per week per term. For York University courses (excepting some courses offered by the Faculty of Education), the number of credits in each course is indicated by the number which follows the four-digit course number. (*Note: practicum credits are defined differently - see Kinesiology and Health Science in the Courses of Instruction section of this calendar.*)

### Year of Study Equivalent

When it is necessary to equate credits earned with year level, the following guidelines are used:

- fewer than 24 credits earned - study level one;
- more than or equal to 24 and fewer than 54 credits earned - study level two;
- more than or equal to 54 and fewer than 84 credits earned - study level three;
- more than or equal to 84 credits earned - study level four (with the exception that bachelor programs never go beyond study level three, regardless of the number of credits earned).

### Residence Requirement

In order to qualify for a York University degree in any bachelor or Honours program, a student must have successfully completed a minimum of 30 credits at York University and at least half (50 per cent) of the requirements in each science major/minor must be taken in the Faculty of Science and Engineering.

### Time Limit

There is no time limit for completion of degree requirements in the Faculty of Science and Engineering. Students taking a normal full-time load of approximately 30 credits per fall/winter session can expect to complete a BSc degree in three fall/winter sessions or a BSc Honours degree in four

fall/winter sessions. A limited number of courses are also available during the summer session; a maximum of 12 credits can be taken in that session.

Although there is no minimum number of credits in which a student must enrol in any session, students who do not enrol in any courses in a fall/winter session must formally apply to have their files reactivated before resuming their studies in a subsequent session (see Reactivation in the Faculty of Science and Engineering Advising, Enrolment, Registration, Graduation and Other Administrative Procedures section of this calendar).

Since science curriculum is constantly evolving through the introduction of new course requirements and/or prerequisites, students are strongly advised to complete their degree requirements in as short a period of time as their personal circumstances and university schedules permit, in order to minimize the impact of such changes.

## Course Credit Exclusions

The University offers some courses in which at least part of the content is similar to that presented in other courses. To ensure that credit is not granted more than once for similar content, the Faculty of Science and Engineering designates such courses as course credit exclusions. The exclusion(s) for a particular course are listed in the course description.

If a student in the Faculty of Science and Engineering enrolls in and successfully completes two courses which are designated as exclusions of each other, credit is given for only one. Both courses appear on the student's official York University transcript.

A course (or combination of courses) designated as an exclusion for another course may be substituted for the latter (for the purposes of satisfying prerequisite and/or degree requirements) only with Faculty/department/division/program approval. Information regarding approved substitute courses may be found in the program of study requirements in the Faculty of Science and Engineering Programs of Study section of this calendar, in the prerequisite requirements listed for courses in this calendar, or in the departmental supplementary calendars.

## College Courses

Regulations governing college courses vary from Faculty to Faculty. The following regulations apply to the Faculty of Science and Engineering degree candidates:

- college courses not cross-listed with humanities or social science cannot fulfill general education requirements;
- a maximum of six credits from 1000-level college courses may be counted towards a degree in the Faculty of Science and Engineering.

## Courses Taken Elsewhere

See Transfer Credit and Courses Taken Outside the Faculty/Letters of Permission in the Faculty of Science and Engineering Advising, Enrolment, Registration, Graduation and Other Administrative Procedures section of this calendar.

## General Education Requirements

General education courses are required within all degree programs in the Faculty of Science and Engineering. These non-science courses provide a broad perspective on current scholarship and the diversity of human experience. The courses are also expected to enhance students' critical skills in reading, writing and thinking, and contribute to their preparation for post-university life.

All degree candidates in the Faculty of Science and Engineering must complete a minimum of 12 credits from two different areas of study, including at least three credits from each area, subject to the restrictions noted below. For the purposes of this regulation "different area" means offered by different academic units such as divisions, departments or Faculties and excluding courses offered by similar departments in different Faculties (such as English in the Faculty of Arts and the Atkinson Faculty of Liberal and Professional Studies). Subject to the restrictions listed below, courses in the following areas may be taken in the Faculty of Arts, the Atkinson Faculty of Liberal and Professional Studies or Glendon.

anthropology  
classical studies \*  
economics  
English  
French studies \*  
geography \*\*  
history  
humanities (courses not cross-listed with STS)  
languages, literature and linguistics \*  
philosophy  
political science  
social science (courses not cross-listed with STS)  
sociology  
women's studies \*\*\*

The following courses offered by the Faculty of Environmental Studies may be taken to satisfy Faculty of Science and Engineering general education requirements: ES/ENVS 1000 6.00, ES/ENVS 2150 3.00.

The following courses offered by the Faculty of Fine Arts may be taken to satisfy Faculty of Science and Engineering general education requirements: FA/DANC 1340 3.00, FA/DANC 2340 3.00, FA/FACS 1900 6.00, FA/FILM 1401 6.00, FA/FILM 1410 6.00, FA/FILM 1701 3.00, FA/FILM 2401 6.00, FA/MUSI 1500 6.00, FA/MUSI 1510 6.00, FA/MUSI 1520 6.00, FA/MUSI 1530 6.00, FA/MUSI 1540 6.00, FA/MUSI 1550 6.00, FA/THFA 1500 6.00, FA/VISA 1110 6.00, FA/VISA 2110 6.00, FA/VISA 2540 6.00, FA/VISA 2550 6.00, FA/VISA 2620 6.00.

General education courses are normally taken at the 1000 or 2000 level, but higher-level courses are acceptable, subject only to prerequisites and course access specifications for enrolment.

Permission may be granted by the Office of Science Academic Services, on an individual basis, for a student to take a course outside the areas and Faculties listed above for general education credit, subject to the course fulfilling the Faculty of Science and Engineering breadth and critical skills requirements for general education courses, the student having the appropriate prerequisites and the course access specifications permitting enrolment. A student who is in doubt regarding whether or not any specific course will fulfill the Faculty of Science and Engineering general education requirements should consult the Office of Science Academic Services.

## Restrictions

1. Courses which are cross-listed as SC courses or which are eligible for SC credit cannot count as general education courses.
2. Courses whose major focus is increased facility in the use of a language cannot count as general education courses. Such courses are offered in the departments marked with an \* above.
3. Quantitative courses focusing on techniques of mathematics or statistics cannot count as general education courses. For example, this applies to some economics courses.
4. \*\* Geography courses cannot be used to satisfy general education requirements for BSc or BSc Honours candidates majoring in geography.
5. \*\*\* excluding women's studies courses which are cross-listed with natural science courses.
6. Humanities and social science courses cross-listed with science and technology studies (STS) courses cannot count as general education courses.

*Note: 1. General education courses may not be taken on a pass/fail basis (see Pass/Fail Grading Option in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar).*

*2. Students may not take for credit any more than three humanities/social science foundations courses (27 credits).*

## General Regulations

1. All students are required to observe the regulations of the University. Unless otherwise stated, any changes in regulations become effective as announced. This policy is not meant to disadvantage students as they proceed through their studies, including those who have completed a number of courses. It is intended to ensure that their preparation for

courses is appropriate and current. Students should consult closely with departments and the Faculty through the advising process.

2. It is the student's responsibility to enrol in only those courses for which the student has successfully completed all designated prerequisites and to take concurrently all specified corequisites not already completed successfully. See also prerequisites/corequisites under Advising in the Faculty of Science and Engineering Advising, Enrolment, Registration, Graduation and Other Administrative Procedures section of this calendar.

3. All BSc and BSc Honours degree candidates are required to indicate a choice of degree program (bachelor, Specialized Honours, Honours major, Honours Double Major or Honours Major/Minor) upon successful completion of 24 credits. Check the minimum cumulative credit-weighted grade point average required for Honours programs (see Academic Standards for BSc and BSc Honours Programs in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar). See also Designation of Honours or Bachelor Program in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar. See the Faculty of Science and Engineering Advising, Enrolment, Registration, Graduation and Other Administrative Procedures section of this calendar for information about changing degree programs.

4. All BSc, BSc Honours and iBSc degree candidates in bachelor and Honours programs must successfully complete the following minimum requirements, normally at the 1000 level:

- at least 24 science credits, excluding SC/CHEM 1500 4.00, SC/MATH 1510 6.00, SC/MATH 1515 3.00, SC/PHYS 1510 4.00 and all natural science courses, and including at least two credits in introductory computer science, six credits in approved mathematics courses, and 12 credits in courses with laboratories;
- 12 general education credits (see General Education Requirements in this section of the calendar).

*Note: Students in the joint Seneca/York Bachelor of Science in Technology (BSc (Tech) program in applied biotechnology are required to take at York University at least 24 science credits, excluding SC/CHEM 1500 4.00, SC/MATH 1510 6.00, SC/MATH 1515 3.00 and SC/PHYS 1510 4.00 and all natural science courses. These 24 credits include six credits in an approved mathematics course, three credits in an approved computer science course and twelve credits in courses with laboratories (SC/BIOL 2010 4.00, SC/BIOL 2030 4.00 and SC/BIOL 2040 4.00). Students in this program must also take two general education courses at Seneca College and six specific general education credits at York University, AS/ECON 1900 3.00 and AS/PHIL 2071 3.00.*

5. **Bachelor Programs.** All BSc degree candidates in all bachelor programs must, through registration in courses at York University or elsewhere deemed creditable towards the BSc degree,

- a) satisfy regulations 2, 3 and 4;
- b) present a total of at least 90 passed credits of which
  - a minimum of 66 must be earned in science courses,
  - a minimum of 24 must be earned in one major science subject area,
  - a minimum of 18 must be earned in courses at the 3000 or higher level;
- c) satisfy the Senate academic standards for bachelor programs - see Academic Standards for BSc and BSc Honours Programs in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar;
- d) satisfy the program of study requirements specified in the Faculty of Science and Engineering Programs of Study section of this calendar for the bachelor program declared.

6. **Honours Programs.** All candidates for the BSc Honours degree in all Honours programs must, through registration in courses at York University or elsewhere deemed creditable towards the BSc Honours degree,

- a) satisfy regulations 2, 3 and 4;
- b) present a total of at least 120 passed credits of which;
  - a minimum of 90 must be earned in science courses (or a minimum of 66 for BSc Honours Double Major and Major/Minor

programs where the second major or the minor is taken in a non-science subject area),

- a minimum of 54 must be earned in the major science subject area (BSc Specialized Honours programs); a minimum of 36 in (each of) the major subject area(s) (BSc Honours major, Honours Double Major and Honours Major/Minor programs); a minimum of 30 in the minor subject area (BSc Honours Major/Minor programs),
  - a minimum of 42 must be earned in courses at the 3000 or higher level.
- c) satisfy the Faculty and Senate academic standards for Honours programs - see Academic Standards for BSc and BSc Honours Programs in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar;
  - d) satisfy the program of study requirements specified in the Faculty of Science and Engineering Programs of Study section of this calendar for the declared Honours program and major and minor subject area(s).
7. **International Bachelor of Science Honours Programs.** All candidates for the iBSc Honours degree in all programs must, through registration in courses at York University or elsewhere deemed creditable towards the iBSc Honours degree,
- a) satisfy regulations 2, 3 and 4;
  - b) present a total of at least 120 passed credits of which;
    - a minimum of 90 must be earned in science courses,
    - a minimum of 54 must be earned in the major science subject area (iBSc Specialized Honours program); a minimum of 36 in the major subject area (iBSc Honours major program),
    - a minimum of 42 must be earned in courses at the 3000 or higher level,
    - 30 required credits outside the science major, consisting of;
      - 12 credits of language study in one of the languages offered at York University,
      - 18 credits of non-science international content courses (see the program requirements in the Faculty of Science and Engineering Programs of Study section of this calendar). These courses may be used toward the requirements of regulation 4, general education requirement.
  - c) satisfy the Faculty and Senate academic standards for Honours programs – see Academic Standards for BSc and BSc Honours Programs in the Faculty of Science and Engineering Regulations Governing Examinations and Academic Standards section of this calendar;
  - d) satisfy the program of study requirements specified in the Faculty of Science and Engineering Programs of Study section of this calendar;
  - e) have one or two exchange terms abroad as a full-time student at an institution with which York has a formal exchange agreement.